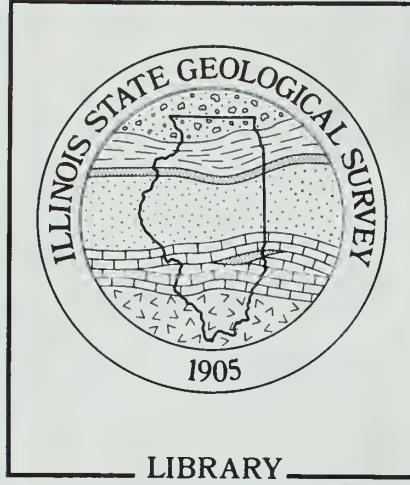


Geol Survey

557
IL6of
1984-1

ILLINOIS GEOLOGICAL
SURVEY LIBRARY



LIBRARY



Bibliography and Index

of Illinois Geology

1984

Selected from Publications Indexed in GeoRef in 1984

Open File Series 1984-1

Illinois State Geological Survey
615 East Peabody Drive
Champaign, IL 61820

ILLINOIS GEOLOGICAL
SURVEY LIBRARY

GeoRef Information System

American Geological Institute
4220 King Street
Alexandria, VA 22302

BIBLIOGRAPHY AND INDEX-OF ILLINOIS GEOLOGY

SERIALS LIST

AAPG Bulletin. [Tulsa, OK: American Association of Petroleum Geologists].

AAPG Explorer. Tulsa, OK: American Association of Petroleum Geologists, 1979-.

AAPG Studies in Geology. Tulsa, OK: American Association of Petroleum Geologists, 1979-.

Abstracts with Programs - Geological Society of America. Boulder, CO: Geological Society of America.

American Antiquity. Austin, TX: Society for American Archaeology, 1935-.

American Journal of Botany. Lawrence, KS: Botanical Society of America, 1914-.

Annals of Glaciology. Cambridge: International Glaciological Society, 1980-.

Annual Field Conference - Society of Economic Paleontologists and Mineralogists. Great Lakes Section. [s.l.]: Society of Economic Paleontologists and Mineralogists, Great Lakes Section.

Bulletin of the Southern California Paleontological Society. Long Beach, CA: Southern California Paleontological Society.

Bulletin Series - Office of Engineering Services, University of Kentucky. Lexington, KY: University of Kentucky, College of Engineering, Office of Engineering Services.

Canadian Journal of Zoology = Journal Canadien de Zoologie. Ottawa, ON: National Research Council of Canada, 1951-.

Circular - Illinois State Geological Survey. Urbana, IL: Illinois State Geological Survey, 1906-.

Environmental Geology Notes. Urbana, IL: Illinois State Geological Survey, 1965-.

Environmental Science & Technology. Washington, DC: American Chemical Society, 1978-.

Eos, Transactions, American Geophysical Union. Washington, DC: American Geophysical Union.

Field Trip Guide Leaflet - Illinois State Geological Survey. Champaign, IL: Department of Energy and Natural Resources, State Geological Survey Division.

Geoderma. Amsterdam: Elsevier Scientific Publishing Company, 1967-.

Geologica et Palaeontologica. Marburg: Elwert, 1967-.

Geological Survey Circular. Reston, VA: U. S. Geological Survey, 1950-.

Geological Survey Professional Paper. Washington, DC: U. S. Department of the Interior, Geological Survey, 1902-.

Geological Survey Water-Supply Paper (Washington). Reston, VA: U. S. Department of the Interior, Geological Survey, 1908-.

The Geophysical Journal of the Royal Astronomical Society. London: For the Royal Astronomical Society by the Blackwell Scientific Publication, 1958-.

Geoscience Wisconsin. Madison, WI: University of Wisconsin - Extension, Geological and Natural History Survey, 1977-.

Geotechnique. London: Institution of Civil Engineers, 1948-.

Ground Water. Urbana, IL: National Water Well Association, Ground-Water Technology Division.

Hydrology and Water Resources in Arizona and the Southwest. [s. l.: s. n.].

Illinois Mineral Note. Urbana, IL: Illinois State Geological Survey Division, Illinois Institute of Natural Resources, 1972-.

International Congress on Carboniferous Stratigraphy and Geology. [s. l.: s. n.].

International Congress on Sedimentology = Congres International de Sedimentologie. [s.l.]: International Association of Sedimentologists.

International Journal of Coal Geology. Amsterdam: Elsevier Scientific Publishing Company, 1980-.

International Journal of Rock Mechanics and Mining Sciences & Geomechanics Abstracts. Dxford-New York: Pergamon Press, 1973-.

Jewelry Making Gems & Minerals. Mentone, CA: Gemac Corporation.

JGR. Journal of Geophysical Research. B. Washington, DC: American Geophysical Union, 1978-.

Journal - American Water Works Association. Denver, CO, etc.: American Water Works Association, 1914-.

Journal - Water Pollution Control Federation. Washington, DC: Water Pollution Control Federation.

Journal of Applied Crystallography. Copenhagen: Munksgaard, 1968-.

Journal of Environmental Quality. Madison, WI: Published cooperatively by the American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America, 1972-.

Journal of Hydrology. Amsterdam: Elsevier Scientific Publishing Company, 1963-.

Journal of Paleontology. Tulsa, OK: Society of Economic Paleontologists and Mineralogists, 1927-.

JPT. Journal of Petroleum Technology. Dallas, TX: American Institute of Mining, Metallurgical and Petroleum Engineers.

Lapidary Journal. San Diego, CA: Lapidary Journal, Inc., 1947-.

Micropaleontology. New York, NY: American Museum of Natural History.

Miscellaneous Investigations Series - U. S. Geological Survey. Washington, DC: U. S. Geological Survey.

Miscellaneous Series Publication - Botanical Society of America [s. l.]: Botanical Society of America, 1915-.

Nature (London). London: Macmillan Journals, 1869-.

Northeast Oil Reporter. Denver, CO: Hart Publications, Inc., 1981-.

The NSS Bulletin. Huntsville, AL: National Speleological Society, 1974-.

NUREG/CR (United States Nuclear Regulatory Commission). Washington, DC: U. S. Nuclear Regulatory Commission, Office of Nuclear Regulatory Research.

The Ohio Journal of Science. Columbus, OH: The Ohio Academy of Science.

Open-File Report (United States Geological Survey). Reston, VA: U. S. Geological Survey, 1978).

Proceedings of the Annual William T. Pecora Memorial Symposium on Remote Sensing. [Washington, DC: s. n.], 1979-.

Proceedings of the National Symposium on Aquifer Restoration and Ground-Water Monitoring. Worthington, OH: National Water Well Association.

Program with Abstracts - Geological Association of Canada. Waterloo, ON: Geological Association of Canada, 1976-.

Quaternary Research (New York). New York, NY: Academic Press, 1970-.

Soil Science. Baltimore, MD: The Williams & Wilkins Company, 1916-.

Story of Illinois Series. Springfield, IL: Illinois State Museum.

Transactions of the Illinois State Academy of Science. Springfield, IL: Illinois State Academy of Science.

Transactions of the SPWLA Annual Logging Symposium. Houston, TX: Society of Professional Well Log Analysts.

U. S. Geol. Surv., Misc. Field Stud. Map. U. S. Geological Survey, Miscellaneous Field Studies Map. Reston, Virginia.

Water Resources Bulletin (Baton Rouge). Baton Rouge, LA: Louisiana Geological Survey, 1960-.

Water Resources Bulletin (Urbana). Minneapolis, MN: American Water Resources Association, St. Anthony Falls Hydraulic Laboratory, 1965-.

Water-Resources Investigations. [Reston, VA]: U. S. Geological Survey, 1972-.

BIBLIOGRAPHY AND INDEX OF ILLINOIS GEOLOGY

BIBLIOGRAPHY

Agnew, Allen F. Application of geology to the discovery of zinc-lead ore in the Wisconsin-Illinois-Iowa district: *in* Mineral exploration (Lacy, Willard C., editor), Hutchinson Ross Publ. Co., Stroudsburg, PA, United States, Vol. 70, p. 116-130, 2 tables, strat. col., sketch maps, 46 ref., 1983. Reprinted from Am. Inst. Mining, Metall. and Pet. Eng. Trans. 202: 781-795 (1955).

Aiken, O. W.; Keller, G. R.; and Hinze, W. J. Geological significance of surface gravity measurements in the vicinity of the Illinois deep drill holes: *in* Illinois Deep Hole Project (Anonymous), JGR. Journal of Geophysical Research. B, Vol. 88, No. 9, p. 7307-7314, sketch maps, 27 ref., September 10, 1983.

Algermissen, S. T. see Morris, R. H.

Allen, H. E., Jr.; and Gray, J. R. (investigators). Runoff and sediment transport from an agricultural watershed in northern Illinois [abstr.]: Geological Survey Professional Paper, Vol. 1375, p. 162, 1983.

Allen, Howard E., Jr.; and Gray, John R. Runoff, sediment transport, and water quality in a northern Illinois agricultural watershed before urban development 1979-81: Water-Resources Investigations, 55 p., illus. (incl. 11 tables, sketch maps), 23 ref., 1984. (Rep. No. WRI 82-4073) available from: U. S. Geol. Surv., Open-File Serv. Sect., West. Distrib. Branch, Fed. Cent., Denver, CO, United States.

Allen, Robert D.; and Pincus, Howard J. Confined aquifers as reservoirs for compressed air [abstr.]: *in* The Geological Society of America, 96th annual meeting (Anonymous), Abstracts with Programs - Geological Society of America, Vol. 15, No. 6, p. 513. October 1983.

Ambrose, William Anthony. Tide-dominated deltaic deposits of the Spoon Formation (Pennsylvanian) in a narrow, subsiding trough, southern Illinois [abstr.]: *in* The Geological Society of America, 96th annual meeting (Anonymous), Abstracts with Programs - Geological Society of America, Vol. 15, No. 6, p. 514. October 1983.

Ambrose, William Anthony. Aggraded fluvial and tide-dominated deltaic deposits of the Spoon Formation (Pennsylvanian) in the southern Illinois Basin; a shallow embayment: 105 p., 4 plates, Master's, 85 ref., 1983, Univ. of Texas, Austin, TX.

Amsden, Thomas W. Dolitic strata of the Keel Formation and Edgewood Group (Late Ordovician and Early Silurian), Texas Panhandle to the Mississippi Valley [abstr.]: *in* North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. Campbell, chairperson), Abstracts with Programs - Geological Society of America, Vol. 15, No. 4, p. 222-223, March 1983.

Amstutz, G. C. see Zimmermann, R. A.

Anderson, Thomas F.; and Kruger, John M. Sulfur isotopic fractionation in the formation of pyrite from Upper Devonian black shales [abstr.]: *in* The Geological Society of America, 96th annual meeting (Anonymous), Abstracts with Programs - Geological Society of America, Vol. 15, No. 6, p. 516, October 1983.

Anderson, Thomas F. see also Westgate, Linda M.

Andrews, J. S. see Morris, R. H.

Anonymous. Illinois Deep Hole Project: JGR. Journal of Geophysical Research. B, Vol. 88, No. 9, p. 7267-7385, illus., September 10, 1983. Individual papers are cited separately.

Anonymous. Illinois; Buckhorn East most exciting play: Northeast Oil Reporter, Vol. 3, No. 4, p. 24-25, May 1983.

Anuta, Paul; Bartolucci, L.; Dean, E.; et al. Landsat-4 data quality analysis: *in* Pecora VIII symposium proceedings; Satellite land remote sensing advancements for the eighties (Byrnes, Raymond A.; et al.), Proceedings of the Annual William T. Pecora Memorial Symposium on Remote Sensing, Vol. 8, p. 96-108, 9 tables, 4 ref., 1983. (Publ. by Augustana Res. Inst., Augustana Coll., Sioux Falls).

Armstrong, G. see McCray, J. G.

Arnold, E. P. see Morris, R. H.

Asch, David L. see Conard, Nicholas

Asch, Nancy B. see Conard, Nicholas

Atherton, Elwood; and Collinson, Charles. Geologic history of the Illinois Basin [abstr.]: in The Geological Society America, Southeastern Section, 33rd annual meeting; North Central Section, 18th annual meeting (Anonymous), Abstracts with Programs - Geological Society of America, Vol. 16, No. 3, p. 123, February 1984.

Austin, Ronald L. see Rhodes, F. H. T.

Baird, Gordon C.; and Shabica, Charles W. Paleoecology of an estuarine-deltaic biota; community-habitat mosaic of the Pennsylvanian Mazon Creek fauna in Northeast Illinois [abstr.]: in The Geological Society of America, 96th annual meeting (Anonymous), Abstracts with Programs - Geological Society of America, Vol. 15, No. 6, p. 519, October 1983.

Baird, Gordon C.; Shabica, Charles W.; and Kuecher, Gerald J. Depositional events recorded in the Francis Creek Shale; taphonomy of the Pennsylvanian Mazon Creek locality in Illinois [abstr.]: in The Geological Society America, Southeastern Section, 33rd annual meeting; North Central Section, 18th annual meeting (Anonymous), Abstracts with Programs - Geological Society of America, Vol. 16, No. 3, p. 124, February 1984.

Bakr, Adel A. Spatial variability of hydrologic data; the cost of ignoring it [abstr.]: in Ohio Academy of Science; 93rd annual meeting (Elfner, Lynn Edward, editor), The Ohio Journal of Science, Vol. 84, No. 2, p. 15, March 30, 1984.

Balch, A. H. see Miller, John J.

Baliga, K. Y.; and O'Connor, J. Y. Biologically mediated chemical changes in the filtration of aerated ground waters: Journal - American Water Works Association, Vol. 63, No. 5, p. 292-297, illus. (incl. 2 tables), 16 ref., May 1971. Paper presented at the Am. Water Works Assoc. annual conference on June 23, 1970 in Washington, DC.

Barber, A. H., Jr.; George, C. J.; Stiles, L. H.; et al. Infill drilling to increase reserves; actual experience in nine fields in Texas, Oklahoma, and Illinois: JPT. Journal of Petroleum Technology, Vol. 35, No. 9, p. 1530-1538, illus., 7 ref., August 1983.

Barcelona, Michael J.; and Naymik, Thomas G. Dynamics of a fertilizer contaminant plume in groundwater: Environmental Science & Technology, Vol. 18, No. 4, p. 257-261, illus. (incl. 2 tables), 19 ref., April 1984.

Barnes, H. L. Ore-depositing reactions in mississippi valley-type deposits: in International conference on mississippi valley type lead-zinc deposits; proceedings volume (Kisvarsanyi, Geza, editor; et al.), Univ. Mo. Rolla, Rolla, MO, United States, p. 77-85, illus., 24 ref., 1983.

Barnhardt, Michael L. Identifying buried Indian mounds and geomorphic surfaces near Cahokia, Illinois [abstr.]: in North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. Campbell, chairperson), Abstracts with Programs - Geological Society of America, Vol. 15, No. 4, p. 211, March 1983.

Bartolucci, L. see Anuta, Paul

Basinger, James F.; Rothwell, Gar W.; and Stewart, Wilson N. Cauline vasculature and leaf trace production in medullasan pteridosperms: American Journal of Botany, Vol. 61, No. 9, p. 1002-1015, illus. (incl. 1 table), 35 ref., October 1974.

Baskerville, C. A. see Morris, R. H.

Bauer, Robert A.; and DuMontelle, Paul B. Disturbance of overburden bedrock by coal mine subsidence in Illinois [abstr.]: in The Geological Society of America, 96th annual meeting (Anonymous), Abstracts with Programs - Geological Society of America, Vol. 15, No. 6, p. 523, October 1983.

Bauer, Robert A. see also Demaris, Philip J.

Baumann, Dean R. The occurrence and distribution of mineral matter in coal lithotypes in the Herrin (No. 6) Coal seam under marine and nonmarine influences: 151 p., 14 plates, Master's, 40 ref., 1982, Southern Illinois Univ., Carbondale, IL.

Berg, Richard C. The origin and early genesis of clay bands in youthful sandy soils along Lake Michigan, U.S.A.: Geoderma, Vol. 32, No. 1, p. 45-62, illus. (incl. 79 anal., 3 tables, sketch map), 39 ref., January 1984.

Berg, Richard C.; Kempton, John P.; and Reinertsen, David L. A guide to the geology of the Capron-Rockford area: Field Trip Guide Leaflet - Illinois State Geological Survey, 1982B, variously paginated, illus. (incl. block diag., strat. cols., sects., sketch maps), 7 ref., May 15, 1982.

Bernreuter, D. L. see Bohn, M. P.

-- see Chen, J. J.

Bhawmik, Nani G. Hydraulic geometry of floodplains: in Global water; science and engineering; the Ven Te Chow memorial volume (Stout, Glenn E., editor; et al.), Journal of Hydrology, Vol. 68, No. 1-4, p. 369-404, illus. (incl. 7 tables, sketch map; map), 20 ref., February 1984.

Bigelow, Tom. Small pockets yielding big production: Northeast Oil Reporter, Vol. 3, No. 10, p. 29-33, illus. (incl. sketch maps), November 1983.

Bigelow, Tom. Fault, uplift discovered in Adams County: Northeast Oil Reporter, Vol. 3, No. 2, p. 37-39, illus. (incl. sketch map), March 1983.

Bigelow, Tom. Wildcat find strengthens interest in Renault sand: Northeast Oil Reporter, Vol. 3, No. 2, p. 41-43, sketch map, March 1983.

Blasing, T. J.; and Duvick, Daniel. Reconstruction of precipitation history in North American corn belt using tree rings: Nature (London), Vol. 307, No. 5947, p. 143-145, illus. (incl. sketch maps), 22 ref., January 12, 1984. Oak Ridge Natl. Lab., Environ. Sci. Div.; Publ. No. 2243.

Bleuer, N. K. see Lineback, J. A.

Bleuer, Ned K. see Kempton, John P.

Bohn, M. P.; Shieh, L. C.; Wells, J. E.; et al. Recent results in seismic probabilistic risk analysis from the SSMRP analysis of the Zion nuclear power plant: in Proceedings, seismic risk and heavy industrial facilities conference (Cummings, G. E., chairperson; et al.), Lawrence Livermore Natl. Lab., Livermore, CA, United States, p. 106-107, 1983.

Borghese, J. V. see Galloway, D. L.

Brabb, Earl E. see Killey, M. M.

-- see Morris, R. H.

Brand, Uwe. Diagenetic history and fluid migration pathways of Silurian formations, Michigan Basin [abstr.]: in GAC.MAC, 1984; program with abstracts; joint annual meeting--AGC.AMC, programme et resumes; reunion annuelle conjointe (Fyfe, William S., chairperson), Program with Abstracts - Geological Association of Canada, Vol. 9, p. 48, 1984. Geological Association of Canada; Mineralogical Association of Canada.

Brecke, E. A. A supplemental report on the Cave In Rock fluorspar district, Hardin County, Illinois: in International conference on mississippi valley type lead-zinc deposits; proceedings volume (Kisvarsanyi, Geza, editor; et al.), Univ. Mo. Rolla, Rolla, MO, United States, p. 415-423, illus. (incl. sketch map), 9 ref., 1983.

Brenckle, Paul L.; Marshall, F. C.; Waller, S. F.; et al. Calcareous microfossils from the Mississippian Keokuk Limestone and adjacent formations, Upper Mississippi River valley; their meaning for North American and intercontinental correlation: Geologica et Palaeontologica, Vol. 15, p. 47-88 (incl. German sum.), illus. (incl. 2 tables, 10

plates, geol. sketch map, sketch map, sect., strat. col.), 1982. *Fusulinina, Dasycladaceae, problematic microfossils.*

Brockman, S. R. see Morris, R. H.

Brossman, James J. Surficial geology of Kendall County, Illinois: 66 p., 9 plates, Master's, 26 ref., 1982, Northern Illinois Univ., DeKalb, IL.

Brown, Floyd W. see Hatcher, Patrick G.

Brown, James A. see Conard, Nicholas

Brugam, Richard B.; Carlson, Mark A.; Chakraverty, Sumitra; et al. Post-mining neutralization of acidic surface mine lakes: 96 p., illus. (incl. 9 tables), 50 ref., April 1983. (Rep. No. UILU-WRC-83-0178) available from: Univ. Ill. Water Resour. Cent., Urbana, IL, United States. Final technical completion report to U. S. Dep. Interior, Bur. Reclamation.

Bunker, Bill J. see Ludvigson, Gregory A.

Burk, Mitchell Keith. Facies and depositional environments of the Energy Shale (Pennsylvanian) in southwestern Jefferson County, Illinois: 138 p., 10 plates, Master's, 43 ref., 1982, Southern Illinois Univ., Carbondale, IL.

Burk, Mitchell Keith; and Utgaard, John. Facies and depositional environments of Energy Shale Member (Carbondale Formation, Pennsylvanian), southwestern Jefferson County, Illinois [abstr.]: in AAPG Eastern Section meeting (Anonymous), AAPG Bulletin, Vol. 67, No. 9, p. 1454, September 1983.

Byers, Charles W. see Winfree, K. E.

Cahill, Richard A.; Shiley, Richard H.; and Shimp, Neil F. Forms and volatilities of trace and minor elements in coal; I. A comparison of three pyrolysis units: Environmental Geology Notes, Vol. 102, p. 1-22, illus. (incl. 5 tables), 18 ref., September 1982.

Cahill, Richard A. see also Chou, C. L.

-- see also DeMaris, Philip J.

Callender, C. A. see Dahl, H. M.

Carlson, Mark A. see Brugam, Richard B.

Carozzi, Albert V.; and Gerber, Murry S. Crinoid arenite banks and crinoid wacke inertia flows; a depositional model for the Burlington Limestone (Middle Mississippian), Illinois, Iowa, and Missouri, USA: in Part 1 Atlantic Coast basins; Part 2, Paleogeography and paleotectonics; Part 3, Sedimentology and geochemistry (Geldsetzer, Helmut H. J., editor; et al.), International Congress on Carboniferous Stratigraphy and Geology, Vol.

9, No. 3, p. 452-460, illus. (incl. 2 plates, sketch map), 13 ref., 1984.

Carpenter, G. L.; Van Den Berg, Jacob; Ponsetto, Louis R.; et al. Oil and gas developments in East-Central States in 1982: *in* World energy developments, 1982 (Murray, T. H., Jr., prefacer), AAPG Bulletin, Vol. 67, No. 10, p. 1600-1611, 9 tables, sketch maps, October 1983.

Cartwright, K.; and Visocky, A. P. Hydrogeology of the Mahomet bedrock valley deposits [abstr.]: *in* The Geological Society of America, 96th annual meeting (Anonymous), Abstracts with Programs - Geological Society of America, Vol. 15, No. 6, p. 540, October 1983.

Cartwright, Keros; and Kempton, John P. Hydrogeology of glacial terranes in the Great Lakes region [abstr.]: *in* Geological Society of America, 94th annual meeting (Anonymous), Abstracts with Programs - Geological Society of America, Vol. 13, No. 7, p. 423, September 1981.

Cartwright, Keros see also Foster, J. B.

-- see also Heidari, Manoutchehr

-- see also Johnson, Thomas M.

-- see also Klein, S.

Chakraverty, Sumitra see Brugam, Richard B.

Chapman, W. L.; and Schafers, C. J. Shallow sand channel, coal exploration, Illinois Basin: *in* Seismic expression of structural styles: a picture and work atlas; Volume I (Bally, A. W., editor), AAPG Studies in Geology, Vol. 15, p. 1.2.1-33-1.2.1-34, illus. (incl. sketch map), 1983.

Chauff, Karl M. Multielement conodont species and ecological interpretation of the lower Osagean (Lower Carboniferous) conodont zonation from Midcontinent North America: Micropaleontology, Vol. 29, No. 4, p. 404-429, illus. (incl. 2 tables, 3 plates, sketch map), 53 ref., January 12, 1984.

Chen, J. J.; Bernreuter, D. L.; and Johnson, J. J. Validation of current analytical procedures for site response analysis: *in* Proceedings, seismic risk and heavy industrial facilities conference (Cummings, G. E., chairperson; et al.), Lawrence Livermore Natl. Lab., Livermore, CA, United States, p. 36-37, 3 ref., 1983.

Chen, Pei-Yuan; and Shaffer, Nelson R. Classification of clastic sediments in Pennsylvanian coal-bearing formations emphasizing mudrock lithology: *in* Part 1, Atlantic Coast basins; Part 2, Paleogeography and paleotectonics; Part 3, Sedimentology and geochemistry (Geldsetzer, Helmut H. J., editor; et al.), International Congress on Carboniferous Stratigraphy and Geology, Vol. 9, No. 3, p. 443-451, 1 table, 2 plates, 17 ref., 1984.

Chong, She-Kong. Variations in hydrologic soil properties caused by mining activities: *in* Proceedings, 1982 symposium on surface mining, hydrology, sedimentology, and reclamation (Graves, Donald H., editor), Univ. Ky., Lexington, KY, United States, Vol. UKY BU129, p. 407-413, illus. (incl. 1 table), 17 ref., December 1982.

Chou, C. L.; Cahill, Richard A.; Steele, J. D.; et al. Geochemistry of trace elements and sulfur in the Springfield (No. 5) Coal in the Illinois Basin [abstr.]: *in* The Geological Society of America, 96th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 15, No. 6, p. 543, September 1983.

Chou, C. L. see also Frost, J. K.

Chou, Chen-Lin. Relationship between geochemistry of coal and the nature of strata overlying the Herrin Coal in the Illinois Basin [abstr.]: International Congress on Sedimentology = Congres International de Sedimentologie, Vol. II, p. 60, 1982.

Chou, Chen-Lin. Inorganic geochemistry of Illinois Basin coals [abstr.]: *in* AAPG Eastern Section meeting (Anonymous), AAPG Bulletin, Vol. 67, No. 9, p. 1454, September 1983.

Chou, Chen-Lin see also Eggert, D. L.

Christensen, N. I. see Wang, H. F.

Clayton, Robert N. see Kombrink, Mark

Cleaveland, Thomas H. Geostatistical analysis of the facies and thickness variation in the Brereton Limestone and the Anna Shale in part of southwestern Illinois: 140 p., 8 plates, Master's, 22 ref., 1983, Southern Illinois Univ., Carbondale, IL.

Cluff, R. M. see Frost, J. K.

Coates, M. S.; Haimson, Bezalel C.; Hinze, W. J.; et al. Introduction to the Illinois Deep Hole Project: *in* Illinois Deep Hole Project (Anonymous), JGR. Journal of Geophysical Research, B, Vol. 88, No. 9, p. 7267-7285, illus. (incl. 1 table, sketch maps), 50 ref., September 10, 1983.

Cobb, James C. see Whelan, Joseph F.

Collinson, Charles; Hansel, Ardith K.; and Larsen, Curtis E. Late Holocene beach ridges and water level cycles in Lake Michigan [abstr.]: *in* North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. Campbell, chairperson), Abstracts with Programs - Geological Society of America, Vol. 15, No. 4, p. 259, March

1983. 4000-450 years b.p.

Collinson, Charles; Hansel, Ardith K.; and Norby, Rodney D. Shoreline processes and geomorphology, southwestern Lake Michigan (Field trip 6): in Field trips in Midwestern geology; Volume 1 (Shaver, Robert H., editor; et al.), Indiana Geol. Surv., Bloomington, IN, United States, p. 139-140, 5 ref., 1983.

Collinson, Charles see also Atherton, Elwood

Conard, Nicholas; Asch, David L.; Asch, Nancy B.; et al. Accelerator radiocarbon dating of evidence for prehistoric horticulture in Illinois: Nature (London), Vol. 308, No. 5958, p. 443-446, 1 table, sketch map, 45 ref., March 29, 1984.

Cook, Thomas G. see Conard, Nicholas

Couture, Rex A.; Seitz, Martin G.; and Steindler, Martin J. Sampling of brine in cores of Precambrian granite from northern Illinois: in Illinois Deep Hole Project (Anonymous), JGR. Journal of Geophysical Research. B, Vol. 88, No. 9, p. 7331-7334, illus. (incl. 1 anal., 4 tables), 13 ref., September 10, 1983.

Coveney, Raymond M., Jr. Thin black Pennsylvanian-age shales of the Mid-continent U.S.; a neglected metallic resource? [abstr.]: in Geological Society of America, 94th annual meeting (Anonymous), Abstracts with Programs - Geological Society of America, Vol. 13, No. 7, p. 432, September 1981.

Cover, L. E. see Bohn, M. P.

Cowan, Ellen Anne. Deposition of bottom sediment in Lake Ellyn, Glen Ellyn, Illinois: 109 p., Master's, 81 ref., 1982, Northern Illinois Univ., DeKalb, IL.

Crelling, John C. Spectral analysis of fluorescent macerals in the Herrin No. 6 coal seam [abstr.]: in The Geological Society of America, 96th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 15, No. 6, p. 550, September 1983.

Crelling, John C.; and Teerman, Stanley C. Variations in the forms and occurrences of sulfur in the Herrin No. 6 coal seam in southern Illinois [abstr.]: in Geological Society of America, 94th annual meeting (Anonymous), Abstracts with Programs - Geological Society of America, Vol. 13, No. 7, p. 434, 3 anal., 2 tables, September 1981.

Crelling, John C. see also Kravits, C. M.

-- see also Kravits, Christopher M.

Cross, Aureal T. Plants of Devonian-Mississippian black shales, Eastern Interior, U.S.A. [abstr.]: in AAPG annual convention with divisions SEPM/EMD/DPA (Anonymous), AAPG Bulletin, Vol. 67, No. 3, p.

444-445, March 1983.

Culberson, S. Frank. The outlook for shale oil: -- UPT. Journal of Petroleum Technology, Vol. 34, No. 5, p. 965-972, illus. (incl. sketch map, 4 tables), May 1982. Distinguished author series.

Cummings, T. E. see Mathis, B. J.

Czuczwa, Jean M.; and Hites, R. A. Environmental fates of polychlorinated dioxins and furans as determined from sediment cores [abstr.]: in American Geophysical Union; 1984 ocean sciences meeting (Anonymous), Eos, Transactions, American Geophysical Union, Vol. 64, No. 52, p. 1096, December 27, 1983.

Dahl, H. M.; Callender, C. A.; and Schroeder, P. A. Geologic factors influencing reservoir performance at Texaco's Salem Tertiary recovery project, Marion County, Illinois [abstr.]: in AAPG annual convention with divisions SEPM/EMD/DPA (Anonymous), AAPG Bulletin, Vol. 67, No. 3, p. 445-446, March 1983.

Dahl, P. S. see Eckstein, Y.

Daniel, David E. Methods for disposing of low-level radioactive waste in the ground: in Toxic materials; methods for control (Armstrong, Neal E., editor; et al.), Univ. Tex. Austin, Cent. Res. Water Resour., Austin, TX, United States, p. 187-202, illus. (incl. sects, sketch map, 1 table), 7 ref., 1983. 10th water resources symposium.

Daniels, Jeffrey J.; Dlhoeft, Gary R.; and Scott, James H. Interpretation of core and well log physical property data from drill hole UPH-3, Stephenson County, Illinois: Open-File Report (United States Geological Survey, 1978), 26 p., illus. (incl. 1 table), 20 ref., 1982. (Rep. No. 82-0941) available from: U. S. Geol. Surv., Open-File Serv. Sect., West. Distrib. Branch, Fed. Cent., Denver, CO, United States.

Daniels, Jeffrey J.; Dlhoeft, Gary R.; and Scott, James H. Interpretation of core and well log physical properties data from drill hole UPH-3, Stephenson County, Illinois: in Illinois Deep Hole Project (Anonymous), JGR. Journal of Geophysical Research. B, Vol. 88, No. 9, p. 7346-7354, illus. (incl. 1 table), 20 ref., September 10, 1983.

Danner, Stephen K. Illinois mined-out coal areas; map and data system [abstr.]: in AAPG Eastern Section meeting (Anonymous), AAPG Bulletin, Vol. 67, No. 9, p. 1454, September 1983.

Danner, Stephen K.; and Nelson, W. John. Thin and disturbed Herrin (No. 6) coal near the boundaries of the Illinois Basin [abstr.]: in The Geological Society of America, 95th annual meeting (Braunstein, Jules, chairperson; et al.), Abstracts with Programs - Geological

Society of America, Vol. 14, No. 7, p. 472, August 1982.

Dathe, David B.; and Weiss, Malcolm P. The origin of mottled dolomitic limestones in the Platteville Group (Ordovician) of northern Illinois [abstr.]: in North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. Campbell, chairperson), Abstracts with Programs - Geological Society of America, Vol. 15, No. 4, p. 255, March 1983.

Davidson, R. R. see Perez, J. Y.

de Vries, M. Peter see Gray, John R.

Dean, E. see Anuta, Paul

Delevaux, M. see Stuckless, J. S.

Delevaux, M. H. see Doe, Bruce R.

Delgado, David J. Deposition and diagenesis of the Galena Group in the Upper Mississippi Valley: in Ordovician Galena Group of the Upper Mississippi Valley; deposition, diagenesis, and paleoecology (Delgado, David J., editor), Annual Field Conference - Society of Economic Paleontologists and Mineralogists, Great Lakes Section, Vol. 13, p. A1-A17, 65 ref., 1983.

Demaris, Philip J.; and Bauer, Robert A. Geology of the Herrin (No. 6) coal and associated strata at Old Ben No. 24, Franklin County, Illinois [abstr.]: in Geological Society of America, 94th annual meeting (Anonymous), Abstracts with Programs - Geological Society of America, Vol. 13, No. 7, p. 437, September 1981.

DeMaris, Philip J.; Bauer, Robert A.; and Cahill, Richard A. Coal-ball formation in the Herrin Coal, Franklin County, Illinois [abstr.]: in The Geological Society of America, 96th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 15, No. 6, p. 555, September 1983.

DeMaris, Philip J.; and Nelson, W. John. An erosional channel in the roof of the Illinois Herrin (No. 6) coal; implications for exploration [abstr.]: International Congress on Sedimentology = Congres International de Sedimentologie, Vol. 11, p. 58, 1982.

Demaris, Philip J. see also Nelson, W. John

Denison, Rodger E. see Lidiak, Edward G.

Dennis, Robert L. Studies of Paleozoic ferns [abstr.]: in Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at Oregon State University (Miller, Charles N., chairperson), Botanical Soc. Am., Columbus, OH, United States, p. 19, 1975.

Dennison, John M. Internal stratigraphy of Devonian Tioga Ash beds in Appalachian Valley and Ridge Province [abstr.]: in The Geological Society of America, 96th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 15, No. 6, p. 557, September 1983.

Devera, Joseph A. A new species of Asphaltina from the Grand Tower Limestone of southern Illinois [abstr.]: in North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. Campbell, chairperson), Abstracts with Programs - Geological Society of America, Vol. 15, No. 4, p. 260, March 1983. Devonian.

Devine, J. F. see Morris, R. H.

Dickey, D. D. see Morris, R. H.

Dickhaut, Lisa A. The strontium isotope and rare-earth element systematics of nonsulfide minerals from the Illinois-Kentucky fluorspar district: 64 p., Master's, 1983, Miami Univ., Oxford, OH.

DiMichele, William A. Ecotypic variation in *Tepidodendron dicentricum Felix* [abstr.]: in Program and abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at Virginia Polytechnic Institution and State University (Gifford, Ernest M., editor), Miscellaneous Series Publication - Botanical Society of America, Vol. 156, p. 32, 1978.

DiMichele, William A. *Paralycopodites Morey & Morey*, from the Carboniferous of Euramerica; a reassessment of generic affinities and evolution of "Lepidodendron" *brevifolium Williamson*: American Journal of Botany, Vol. 67, No. 10, p. 1466-1476, illus., 39 ref., December 1980.

Doe, B. R. see Stuckless, J. S.

Doe, Bruce R.; Stuckless, J. S.; and Delevaux, M. H. The possible bearing of the granite of the UPH deep drill holes, northern Illinois, on the origin of Mississippi Valley ore deposits: in Illinois Deep Hole Project (Anonymous), JGR. Journal of Geophysical Research, B, Vol. 88, No. 9, p. 7335-7345, illus. (incl. 3 anal., 3 tables, sketch map), 28 ref., September 10, 1983.

Dott, R. H., Jr. The Baraboo Interval; a tale of red quartzites [abstr.]: in North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. Campbell, chairperson), Abstracts with Programs - Geological Society of America, Vol. 15, No. 4, p. 209, March 1983.

Dott, R. H., Jr. see also Winfree, K. E.

Doveton, John H.; and Duff, P. McL. Donald. Passage-time characteristics of Pennsylvanian sequences in Illinois: in Part 1, Atlantic

Coast basins; Part 2, Paleogeography and paleotectonics; Part 3, Sedimentology and geochemistry (Geldsetzer, Helmut H. J., editor; et al.), International Congress on Carboniferous Stratigraphy and Geology, Vol. 9, No. 3, p. 599-604, illus. (incl. 4 tables, sketch map), 21 ref., 1984.

Du Montelle, P. B. see Killee, M. M.

Dufek, Debra A.; and Stidd, Benton M. Structure affinity, and phylogeny of Dolerotheca formosa [abstr.]: in Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at Oklahoma State University (Heimsch, Charles, convener), Miscellaneous Series Publication - Botanical Society of America, Vol. 157, p. 32, 1979.

Duff, P. McL. Donald see Doveton, John H.

DuMontelle, Paul B. see Bauer, Robert A.

-- see Johnson, Thomas M.

-- see Killee, Myrna M.

Duvick, Daniel see Blasing, T. J.

Eadie, Brian J. see Meyers, Philip A.

Eckstein, Y.; Dahl, P. S.; and Vitaliano, C. J. Petrographic and physical factors controlling thermal conductivity of granitic rocks in Illinois deep holes UPH 1, 2, and 3: in Illinois Deep Hole Project (Anonymous), JGR. Journal of Geophysical Research, B, Vol. 88, No. 9, p. 7381-7385, illus. (incl. 2 tables), 4 ref., September 10, 1983. Kent State Univ., Dep. Geol.; Contrib. No. 235.

Eggert, D. A.; and Rothwell, Gar W.

Stewartotheca gen. n. and the nature and origin of complex permineralized medullosan pollen organs: American Journal of Botany, Vol. 66, No. 7, p. 851-866, illus., 11 ref., August 1979.

Eggert, D. A. see also Millay, M. A.

Eggert, D. L.; Chou, Chen-Lin; Maples, Christopher G.; et al. Origin and economic geology of the Springfield Coal Member in the Illinois Basin (Field trip 9): in Field trips in Midwestern geology; Volume 2 (Shaver, Robert H., editor; et al.), Indiana Geol. Surv., Bloomington, IN, United States, p. 121, illus. (incl. 3 tables, 1 plate, strat. cols., sketch maps), 37 ref., 1983.

Eggert, Donald A.; and Kanemoto, Neil Y. The phloem of Lepidodendron [abstr.]: in Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at Arizona State University (Miller, Charles N., chairperson), American Journal of Botany, Vol. 61, No. 5, Suppl., p. 15, June 1974.

Ellsworth, W. L. see Morris, R. H.

Elmore, David see Conard, Nicholas

Factor, David F. The paleoecology of malacostracan arthropods in the Bear Gulch Limestone (Namurian) of central Montana [abstr.]: in The Geological Society America, Southeastern Section, 33rd annual meeting; North Central Section, 18th annual meeting (Anonymous), Abstracts with Programs - Geological Society of America, Vol. 16, No. 3, p. 137, February 1984.

Fang, J. H.; Foit, F. F., Jr.; and Starks, T. H. Mineralogical composition of coal ash calculated from mass-balance equations [abstr.]: in Geological Society of America, 94th annual meeting (Anonymous), Abstracts with Programs - Geological Society of America, Vol. 13, No. 7, p. 449, September 1981.

Fang, J. H.; and Lee, J. P. Estimation of coal resources of Illinois using Monte Carlo methods [abstr.]: in Geological Society of America, 93rd annual meeting, Abstracts with Programs - Geological Society of America, Vol. 12, No. 7, p. 423, August 1980.

Farnsworth, Kenneth B. see Conard, Nicholas

Farrand, W. R. see Lineback, J. A.

Fasnacht, Timothy Lee. A seismic reflection study of the Precambrian basement along the Illinois-Wisconsin state line: 103 p., isopach map 1:5,940, Master's, 61 ref., 1982, Northern Illinois Univ., De Kalb, IL.

Fehrenbacher, J. B. Loess stratigraphy, distribution, and time of deposition in Illinois: Soil Science, Vol. 115, No. 3, p. 176-182, illus. (incl. sketch map), 29 ref., March 1973.

Feiznia, Sadat. Depositional and diagenetic environments of carbonate-siliciclastic rocks of the Glen Dean Formation (Upper Mississippian), Illinois Basin, U.S.A.: 219 p., Doctoral, 1983, Univ. Illinois, Urbana, IL, available from: Univ. Microfilms.

Fenton, Thomas E. Soil erosion in the Corn Belt; problems and solutions [abstr.]: in Geological Society of America, 93rd annual meeting, Abstracts with Programs - Geological Society of America, Vol. 12, No. 7, p. 425, August 1980.

Fiene, F. L.; Russell, S. J.; and Tsui, T. F. Mineral matter and trace elements in the Herrin (No. 6) Coal in the Illinois Basin [abstr.]: in Geological Society of America, 93rd annual meeting, Abstracts with Programs - Geological Society of America, Vol. 12, No. 7, p. 425, August 1980.

Filley, Thomas H.; and Parizek, Richard R. Dynamics of groundwater flow associated with a continental glacier [abstr.]: in The

Geological Society of America, 96th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 15, No. 6, p. 572, September 1983.

Fitzgerald, K. K.; Peters, C. A.; and Zuehls, E. E. Hydrology of area 29, Eastern Region, Interior Coal Province, Illinois: Open-File Report (United States Geological Survey, 1978), 70 p., 1982. (Rep. No. 82-0858) available from: U. S. Geol. Surv., Water Resour. Div., Urbana, IL, United States.

Fitzgerald, K. K. see also Zuehls, E. E.

Fitzgerald, Kathleen K. see Lazaro, Timothy R.

Flemal, Ronald C.; and Nienkerk, Monte M. Regional characteristics of the total dissolved minerals in stream waters of Illinois: Water Resources Bulletin (Urbana), Vol. 12, No. 3, p. 501-509, 4 tables, sketch maps, 10 ref., June 1976. Water Resour. Bull., Pap. No. 76026.

Flock, Mark A. The late Wisconsinan Savanna Terrace in tributaries to the upper Mississippi River: Quaternary Research (New York), Vol. 20, No. 2, p. 165-176, illus. (incl. 1 table, charts, sketch map), 48 ref., September 1983.

Flock, Mark A. see also Hajic, Edwin R.

Fluegeman, Richard H., Jr. The stratigraphic position of Paleocene foraminifera from Kentucky and Illinois [abstr.]: in The Geological Society America, Southeastern Section, 33rd annual meeting; North Central Section, 18th annual meeting (Anonymous), Abstracts with Programs - Geological Society of America, Vol. 16, No. 3, p. 138, February 1984.

Fluegeman, Richard H., Jr.; and Pope, John K. Brainard Shale outliers (Upper Ordovician, Maquoketa Group) in southeastern Indiana [abstr.]: in The Geological Society of America, 96th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 15, No. 6, p. 574, September 1983.

Fochtmann, E. G. see Nedved, T. K.

Foit, F. F., Jr. see Fang, J. H.

Foster, J. B.; Healy, R. W.; Cartwright, Keros; et al. Hydrogeologic controls on the extent and rate of tritium migration from a low-level radioactive waste disposal facility near Sheffield, Illinois [abstr.]: in North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. Campbell, chairperson), Abstracts with Programs - Geological Society of America, Vol. 15, No. 4, p. 212, March 1983.

Foster, J. B.; Healy, R. W.; and Mackey, G. W. (investigators). Ground-water flow to strip-mined lake from low-level

radioactive-waste-disposal site near Sheffield, Illinois [abstr.]: Geological Survey Professional Paper, Vol. 1375, p. 234, -- 1983: --

Fox, John M. see Killey, Myrna M.

Frasz, Geoffrey B. Mastodon bones in an Illinois cave [abstr.]: in Proceedings of the Annual meeting of the National Speleological Society (Rea, G. Thomas, editor), The NSS Bulletin, Vol. 45, No. 1, unpaginated, January 1983. 31,860 yrs. B.P.

Fraunfelter, George H. see Jennings, James R.

Freeny, Dale S. see Mitchell, J. Kent

Fricke, Carl A. P.; and Johnson, Thomas M. The Pleistocene stratigraphy and geomorphology of central-southern Wisconsin and part of northern Illinois: Geoscience Wisconsin, Vol. 8, p. 22-44, illus. (incl. 2 tables, strat. col., sects, sketch map), 23 ref., December 1983.

Frost, J. K.; Harvey, R. D.; Steele, J. D.; et al. Enrichment of trace metals and organic carbon in shales of the New Albany Group [abstr.]: in Geological Society of America, 94th annual meeting (Anonymous), Abstracts with Programs - Geological Society of America, Vol. 13, No. 7, p. 455, September 1981.

Frost, Joyce K. see Kolata, Dennis R.

Frost, Leonard R., Jr. see Lazaro, Timothy R.

Fullerton, D. S. see Lineback, J. A.

Fullmer, Leon R. see Johnson, Thomas M.

Galloway, D. L.; and Borghese, J. V. (investigators). Aquifer studies at a proposed coal strip mine near Industry, Illinois [abstr.]: Geological Survey Professional Paper, Vol. 1375, p. 225, 1983.

Gardner, J. S. see McCall, D. C.

Garrelts, Mary L. Water resources activities in Illinois 1983: 68 p., illus. (incl. 2 tables), December 1983. available from: U. S. Geol. Surv., WRD, Urbana, IL, United States.

Garvin, Paul L. see Ludvigson, Gregory A.

Gastaldo, Robert A. Palaeostachya dircei n. sp., an authigenically cemented equisetalean strobilus from the Middle Pennsylvanian of southern Illinois: American Journal of Botany, Vol. 68, No. 10, p. 1306-1318, illus. (incl. 1 table), 33 ref., December 1981.

Gastaldo, Robert A.; and Matten, Lawrence C. A new species of Trigonocarpus Brongniart from southern Illinois [abstr.]: in Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at Michigan State University

(Luteyn, James L., editor; et al.),
Miscellaneous Series Publication - Botanical
Society of America, Vol. 154, p. 37, May 1977.

Gastaldo, Robert A.; and Matten, Lawrence C.
Trigonocarpus leeanus, a new species from the
Middle Pennsylvanian of southern Illinois:
American Journal of Botany, Vol. 65, No. 8, p.
882-890, illus. (incl. 3 tables), 38 ref.,
September 1978.

Gastaldo, Robert A.; and Matten, Lawrence C. A
preliminary report on a Calamostachys from the
Middle Pennsylvanian of southern Illinois
[abstr.]: in Program and abstracts of papers
to be presented at the meetings of the
Botanical Society of America and certain
affiliated groups at Virginia Polytechnic
Institution and State University (Gifford,
Ernest M., editor), Miscellaneous Series
Publication - Botanical Society of America,
Vol. 156, p. 31, 1978.

George, C. J. see Barber, A. H., Jr.

Gerber, Murry S. see Carozzi, Albert V.

Gilbert, Ray C. see Carpenter, G. L.

Gill, S. A. Design and construction of rock
caissons: in Structural foundations on rock;
Proceedings of the international conference;
Vol. I (Pells, P. J. N., editor), A. A.
Balkema, Rotterdam, Netherlands, p. 241-252,
illus., 18 ref., 1981.

Glass, Herbert D. see Hansel, Ardit K.

Goddard, Tyrone M. see Phillips, Donald B.

Gohn, G. S. see Morris, R. H.

Goldthwait, R. P. see Lineback, J. A.

Good, Charles W. Kallostachys is probably a
Palaeostachya [abstr.]: in Abstracts of
papers to be presented at the meetings of the
Botanical Society of America and certain
affiliated groups at Oregon State University
(Miller, Charles N., chairperson), Botanical
Soc. Am., Columbus, OH, United States, p. 21,
1975.

Good, Charles W. The anatomy and
three-dimensional morphology of Annularia
hoskinsii sp n.: American Journal of Botany,
Vol. 63, No. 6, p. 719-725, illus., 30 ref.,
July 1976.

Good, Charles W. Taxonomic characteristics of
sphenophyllalean cones: American Journal of
Botany, Vol. 65, No. 1, p. 86-97, illus.
(incl. 1 table), 37 ref., January 1978.

Goodwin, Jonathan H. Geology of carbonate
aggregate resources of Illinois: Illinois
Mineral Note, Vol. 87, 12 p., illus. (incl.
strat. col., geol. sketch maps), 16 ref.,
1983.

Gordon, David Walker. Revised hypocenters and
correlation of seismicity and tectonics in the
Central United States: 212 p., Doctoral,
--1983, Saint Louis Univ., St. Louis, MO.
available from: Univ. Microfilms.

Gove, Harry see Conard, Nicholas

Graese, Anne M. see Kolata, Dennis R.

Graf, J. B. Measurement of bedload discharge in
nine Illinois streams with the Helley-Smith
sampler: Water-Resources Investigations, 79
p., illus. (incl. 28 tables, sketch map), 11
ref., 1983. (Rep. No. 83-4136) available from:
U. S. Geol. Surv., Open-File Serv. Sect.,
West. Distrib. Branch, Fed. Cent., Denver, CO,
United States.

Graf, Julia B. Traveltime and longitudinal
dispersion in Illinois streams: Open-File
Report (United States Geological Survey,
1978). 100 p., illus. (incl. 15 tables, sketch
maps), 18 ref., 1984. (Rep. No. OF 84-0468)
available from: U. S. Geol. Surv., Open-File
Serv. Sect., West. Distrib. Branch, Fed.
Cent., Denver, CO, United States.

Graf, Julia B. (investigator). Times of
concentration and storage coefficients for
Illinois streams [abstr.]: Geological Survey
Professional Paper, Vol. 1375, p. 175, 1983.

Graf, Julia B. (investigator). Reach velocities
in Illinois streams [abstr.]: Geological
Survey Professional Paper, Vol. 1375, p. 176,
1983.

Grason, David (investigator). Hydrology of
Federal coal lands in eastern National Forest
areas [abstr.]: Geological Survey
Professional Paper, Vol. 1375, p. 125-126,
1983.

Gray, J. R.; and Mades, D. M. (investigators).
Stage-discharge relations at dams on the
Illinois and Des Plaines Rivers in Illinois
[abstr.]: Geological Survey Professional
Paper, Vol. 1375, p. 175, 1983.

Gray, J. R. see also Allen, H. E., Jr.

Gray, John R.; and de Vries, M. Peter. A system
for measuring surface runoff and collecting
sediment samples from small areas: in
Selected papers in the hydrologic sciences
1984; July 1984 (Meyer, Eric L., editor),
Geological Survey Water-Supply Paper
(Washington), Vol. 2262, p. 7-11, illus.
(incl. 1 table), 8 ref., July 1984.

Gray, John R. see also Allen, Howard E., Jr.

Greene, H. G. see Morris, R. H.

Griffin, Robert A. see Johnson, Thomas M.

Grimmelmann, E. K.; and Lin, D. L. Application
of multivariate regression techniques to the
study of anomalies of geomagnetic variations

in Plano, Illinois and Cascade, Iowa [abstr.]: in American Geophysical Union; 1983 Fall meeting (Anonymous), *Eos, Transactions, American Geophysical Union*, Vol. 64, No. 45, p. 691, November 8, 1983.

Guzan, Michael J.; and Utgaard, John. Petrography and thickness variations of Brereton Limestone Member (Carbondale Formation, Middle Pennsylvanian); an important roof-rock in part of Illinois Basin [abstr.]: in AAPG Eastern Section meeting (Anonymous), *AAPG Bulletin*, Vol. 67, No. 9, p. 1455, September 1983.

Guzan, Michael John. Petrographic investigation and examination of the thickness of the Brereton Limestone (Middle Pennsylvanian) in a portion of the Illinois Basin: 99 p., 5 plates, Master's, 47 ref., 1983, Southern Illinois Univ., Carbondale, IL.

Haimson, Bezalel C. State of stress, permeability, and fractures in the Precambrian granite of northern Illinois: in Illinois Deep Hole Project (Anonymous), *JGR. Journal of Geophysical Research*, B, Vol. 88, No. 9, p. 7355-7371, illus. (incl. 4 tables, sketch maps), 58 ref., September 10, 1983.

Haimson, Bezalel C. see also Coates, M. S.

Hait, M. H., Jr. see Morris, R. H.

Hajic, Edwin R.; and Flock, Mark A. Age and origin of the late Wisconsinan Deer Plain Terrace in the Illinois Valley [abstr.]: in North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. Campbell, chairperson), Abstracts with Programs - Geological Society of America, Vol. 15, No. 4, p. 263, March 1983. 13,000-12,000 years b.p.

Hakkio, Lisa B. Petrology, paleoecology, and depositional environments of a micritic limestone in Cave Hill Member of Kinkaid Formation (Mississippian, Chesterian), southern Illinois [abstr.]: in AAPG Eastern Section meeting (Anonymous), *AAPG Bulletin*, Vol. 67, No. 9, p. 1455-1456, September 1983.

Hansel, Ardith K. The Wadsworth Till Member of Illinois and the equivalent Oak Creek Formation of Wisconsin: in Late Pleistocene history of southeastern Wisconsin (Mickelson, David M., editor; et al.), *Geoscience Wisconsin*, Vol. 7, p. 1-16, 2 tables, strat col., sect., sketch maps, 26 ref., July 1983.

Hansel, Ardith K.; and Glass, Herbert D. Evidence for stagnant ice in the Chain O'Lakes Lowland during deposition of Haeger and Wadsworth till [abstr.]: in North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. Campbell, chairperson), Abstracts with Programs - Geological Society of America, Vol. 15, No. 4, p. 251, March 1983.

Hansel, Ardith K. see also Collinson, Charles

Hansen, William B. Mississippi valley type base metal deposits and the Illinois Basin; a genetic relationship? [abstr.]: in North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. Campbell, chairperson), *Abstracts with Programs - Geological Society of America*, Vol. 15, No. 4, p. 219, March 1983.

Hardesty, Alan F. The distribution of the Piatt Till Member of the Wedron Formation in Coles County, Illinois: 66 p., 1 plate, Master's, 25 ref., 1982, Southern Illinois Univ., Carbondale, IL.

Harrison, W.; Kucera, E. T.; Tome, C.; et al. Chemistry of bottom sediments from the Cal-Sag Channel and the Des Plaines and Illinois rivers between Joliet and Havana, Illinois: 62 p., February 1981. (Rep. No. ANL/ES-112) available from: NTIS, Springfield, VA, United States.

Harvey, R. D. see Frost, J. K.

Hatcher, Patrick G.; Lyons, Paul C.; Brown, Floyd W.; et al. Coalification of tissues (medulllosan seed fern) in a coal ball of the "Herrin (No. 6) Coal Member" of the Carbondale Formation, Illinois Basin [abstr.]: in The Geological Society of America, 94th annual meeting, *Abstracts with Programs - Geological Society of America*, Vol. 13, No. 7, p. 469, September 1981.

Hays, W. H. see Morris, R. H.

Healy, R. W. (investigator). Analysis of soil cores beneath radioactive-waste-disposal site, Sheffield, Illinois [abstr.]: *Geological Survey Professional Paper*, Vol. 1375, p. 234, 1983.

Healy, R. W. see also Foster, J. B.

Hebel, Susan J. see Wilkin, Donovan C.

Heberton, Richard P. Trace and minor element analyses of the Hymera Coal Member of Indiana (Coal VI): Master's, 1983, Indiana Univ., Bloomington, IN.

Heckel, Philip H. Changing concepts of Midcontinent Pennsylvanian cyclothsems, North America: in Part 1, *Atlantic Coast basins*; Part 2, *Paleogeography and paleotectonics*; Part 3, *Sedimentology and geochemistry* (Geldsetzer, Helmut H. J., editor; et al.), *International Congress on Carboniferous Stratigraphy and Geology*, Vol. 9, No. 3, p. 535-553, illus. (incl. sketch maps), 74 ref., 1984.

Heidari, Manoutchehr; and Cartwright, Keros. Analysis of rock stress around a liquid waste injection system in Illinois: *Water Resources Bulletin (Urbana)*, Vol. 17, No. 4, p. 614-622, illus. (incl. strat. cols.), 15 ref., August

1981.

Henderson, L. R. see Chou, C. L.

Herd, D. G. see Morris, R. H.

Herzog, Beverly L. see Johnson, Thomas M.

Heyl, Allen V. Geologic characteristics of three major Mississippi Valley districts: in International conference on mississippi valley type lead-zinc deposits; proceedings volume (Kisvarsanyi, Geza, editor; et al.), Univ. Mo. Rolla, Rolla, MO, United States, p. 27-60, illus. (incl. strat. col., sketch maps), 82 ref., 1983.

Hill, James J. The mineral industry of Illinois: U. S. Bur. Mines, United States, 11 p., illus., 1982. Preprint from Minerals yearbook, 1982, U. S. Bur. Mines.

Hill, Jennifer E. see Maliva, Robert G.

Hines, J. K. see Killey, M. M.

Hines, Jennifer K. see Killey, Myrna M.

Hinze, W. J. see Aiken, O. W.

-- see Coates, M. S.

Hites, R. A. see Czuczwa, Jean M.

Hood, William C. see Dertel, Allen O.

Hoppe, W. J.; Montgomery, C. W.; and Van Schmus, W. R. Age and significance of Precambrian basement samples from northern Illinois and adjacent states: in Illinois Deep Hole Project (Anonymous), JGR. Journal of Geophysical Research, B, Vol. 88, No. 9, p. 7276-7286, 12 anal., 4 tables, 29 ref., September 10, 1983.

Hoppe, W. J. see also van Schmus, W. R.

Hopper, M. G. see Morris, R. H.

Howell, James C.; and Thomas, Bruce D. Evaluation of injection well stimulation as applied to a large micellar/polymer project: JPT. Journal of Petroleum Technology, Vol. 32, No. 5, p. 777-784, illus. (incl. 8 tables), 6 ref., May 1980.

Huestis, G. M. see Rosholt, J. N.

Huff, Warren D. see Kolata, Dennis R.

Hughes, Randall E. see Johnson, Thomas M.

Indiana University, Environmental Systems Application Center. Coal resources fact book: in the collection Illinois Basin Coal Planning Assistance Project, U. S. Geol. Surv., Dff. Earth Sci. Appl., Reston, VA, United States, Vol. 1, 323 p., illus. (incl. strat. cols., charts, tables, sketch maps), 197 ref., February 1983. (Prepared in coop. with Ill.

State Geol. Surv., Indiana Geol. Surv. and Ky. Geol. Surv.).

Indiana University, Environmental Systems Application Center. Socio-economic resources guide book: in the collection Illinois Basin Coal Planning Assistance Project, U. S. Geol. Surv., Environ. Aff. Dff., Reston, VA, United States, Vol. 3, 231 p., illus. (incl. tables, charts, sketch maps), April 1983. (Publ. in coop. with Ill. State Geol. Surv., Indiana Geol. Surv., Ky. Geol. Surv.).

Indiana University, Environmental Systems Application Center. Natural resources guide book: in the collection Illinois Basin Coal Planning Assistance Project, U. S. Geol. Surv., Off. Earth Sci. Appl., Reston, VA, United States, Vol. 2, 320 p., illus. (incl. tables, charts, sketch maps), May 1983.

Indiana University, Environmental Systems Application Center. Information source book: in the collection Illinois Basin Coal Planning Assistance Project, Indiana Univ., Environ. Syst. Appl. Cent., Bloomington, IN, United States, Vol. 4, 185 p., illus. (incl. charts, sketch maps), September 1983. Prepared for the U. S. Geol. Surv.

Jackson, Stephen T. A plant macrofossil assemblage from Illinoian glacial till in Jackson County, Illinois [abstr.]: in Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at Michigan State University (Luteyn, James L., editor; et al.), Miscellaneous Series Publication - Botanical Society of America, Vol. 154, p. 38, May 1977.

Jacobson, Russell J. Stratigraphic correlations of Seelyville, De Koven, and Davis coals (Desmoinesian) of Illinois Basin coalfield [abstr.]: in AAPG Eastern Section meeting (Anonymous), AAPG Bulletin, Vol. 67, No. 9, p. 1456, September 1983.

Jacobson, Russell J. Revised correlations of the Shoal Creek and La Salle limestone members of the Bond Formation (Pennsylvanian) in northern Illinois: in Geologic notes, Circular - Illinois State Geological Survey, Vol. 529, p. 1-6, 2 tables, strat. cols., sects., sketch map, 24 ref., 1983. conodonts, foraminifers.

Jacobson, Russell J.; and Trask, C. Brian. New Burnside "anticline"; part of fluorspar area fault complex? [abstr.]: in AAPG Eastern Section meeting (Anonymous), AAPG Bulletin, Vol. 67, No. 9, p. 1456, September 1983.

Jaeger, Paul. The effects of depositional environment and diagenesis on the porosity and permeability in the Salem Limestone in Union and Monroe counties, southern Illinois: 174 p., Master's, 50 ref., 1982, Southern Illinois Univ., Carbondale, IL.

Jennings, James R. The morphology and relationships of Rhodea, Telangium, Telangiopsis, and Heterangium: American Journal of Botany, Vol. 63, No. 8, p. 1119-1133, illus., 43 ref., September 1976.

Jennings, James R. Algal compressions from the Mississippian of the Illinois Basin [abstr.]: in Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at Michigan State University (Luteyn, James L., editor; et al.), Miscellaneous Series Publication - Botanical Society of America, Vol. 154, p. 38, May 1977.

Jennings, James R. Distribution of fossil plant taxa in the Upper Mississippian and Lower Pennsylvanian Illinois Basin: in Biostratigraphy (Sutherland, Patrick K., editor; et al.), International Congress on Carboniferous Stratigraphy and Geology, 9 (Vol 2), p. 301-312, illus. (incl. 4 plates, strat. cols., sketch maps), 32 ref., 1984.

Jennings, James R.; and Fraunfelter, George H. Paleontology and stratigraphy of strata associated with the basal Chesterian in its type region [abstr.]: in North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. Campbell, chairperson), Abstracts with Programs - Geological Society of America, Vol. 15, No. 4, p. 257, March 1983.

Jennings, James R.; and Fraunfelter, George H. Aux Vases-Renault-Yankeetown depositional sequence in comparison to other Chesterian depositional sequences [abstr.]: in AAPG Eastern Section meeting (Anonymous), AAPG Bulletin, Vol. 67, No. 9, p. 1456-1457, September 1983.

Jesus Gonzalez, H.; Torriani, I. L.; and Luengo, C. A. Characterization of Brazilian high-ash coals by small-angle X-ray diffraction methods: Journal of Applied Crystallography, Vol. 15, No. 3, p. 251-254, illus. (incl. table), 11 ref., 1982.

Johnson, J. J. see Bohn, M. P.

-- see Chen, J. J.

Johnson, T. M. see Foster, J. B.

-- see Klein, S.

Johnson, Thomas M.; Griffin, Robert A.; Cartwright, Keros; et al. Hydrologic investigations of failure mechanisms and migration of organic chemicals at Wilsonville, Illinois: in Proceedings of the Third national symposium on aquifer restoration and ground-water monitoring (Nielsen, David M., editor), Proceedings of the National Symposium on Aquifer Restoration and Ground-Water Monitoring, Vol. 3, p. 413-420, illus. (incl. 2 tables, strat. col., sect., sketch map), 3 ref., 1983.

Johnson, Thomas M. see also Fricke, Carl A. P.

Johnson, W. Hilton. Sedimentological interpretation of the Belgium Member, Banner Formation, eastern Illinois [abstr.]: in North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. Campbell, chairperson), Abstracts with Programs - Geological Society of America, Vol. 15, No. 4, p. 224, March 1983.

Johnson, W. Hilton see also Kempton, John P.

-- see also von Rhee, Robert W.

-- see also Wickham, Susan Specht

Jorgensen, D. G. see Signor, D. C.

Kanemoto, Neil Y. see Eggert, Donald A.

Kehn, T. M. see Klasner, J. S.

Keller, G. R. see Aiken, O. W.

Kelly, Stuart M.; and Maples, Christopher G. Middle Chesterian (Golconda) marine deltaic paleocommunities from the Illinois Basin [abstr.]: in Geological Society of America, 94th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 13, No. 7, p. 485, September 1981.

Kemmis, T. J. Importance of the regelation process to certain properties of basal tills deposited by the Laurentide ice sheet in Iowa and Illinois, U.S.A.: in Proceedings of the symposium on processes of glacier erosion and sedimentation (Gold, L. W., editor; et al.), Annals of Glaciology, Vol. 2, p. 147-152, 1 table, 28 ref., 1981.

Kempton, John P.; Bleuer, Ned K.; and Johnson, W. Hilton. Stratigraphy of the Wedron and Trafalgar formations (Wisconsinan) in east-central Illinois and west-central Indiana (Field trip 3): in Field trips in Midwestern geology; Volume 1 (Shaver, Robert H., editor; et al.), Indiana Geol. Surv., Bloomington, IN, United States, p. 73-75, 10 ref., 1983.

Kempton, John P. see also Berg, Richard C.

-- see also Cartwright, Keros

Kersting, Joseph Jeffrey. The petrology and petrography of the Mt. Simon and pre-Mt. Simon sandstones; evidence for possible Precambrian rifting in the central Midcontinent: Master's, 1982, Univ. of Pittsburgh, Pittsburgh, PA.

Killey, M. M.; Hines, J. K.; Du Montelle, P. B. (compilers); et al. Illinois landslide inventory map: U. S. Geol. Surv., Misc. Field Stud. Map, MF-1691, 1 sheet, environ. geol. map 1:500,000, 1984.

Killey, Myrna M.; Fox, John M.; Hines, Jennifer K.; et al. Stratigraphy and land-use

applications; a case study in surficial geologic mapping of Madison County, Illinois [abstr.]: in North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. Campbell, chairperson), Abstracts with Programs - Geological Society of America, Vol. 15, No. 4, p. 218, March 1983.

Killey, Myrna M.; and Lineback, Jerry A. Stratigraphic reassignment of the Hagarstown Member in Illinois: in Geologic notes, Circular - Illinois State Geological Survey, Vol. 529, p. 13-16, illus. (incl. sect., geol. sketch map), 7 ref., 1983.

Killey, Myrna M. see also Johnson, Thomas M.

Kim, Hyung Keun. Late-glacial and postglacial pollen studies from the Zuehl Farm site, north-central Iowa and the Cattail Channel Bog, northwestern Illinois: 57 p., sketch maps, Master's, 41 ref., 1982, Univ. of Iowa, Iowa City, IA. 8900-12,500 yr. BP.

King, James E. Fossils: Story of Illinois Series, Vol. 14, 68 p., illus. (incl. plates, strat. col., geol. sketch map), 9 ref., 1982.

Klasner, J. S. Geologic map of the Burden Falls Roadless Area, Pope County, Illinois: U. S. Geol. Surv., Misc. Field Stud. Map, MF-1565-A, 1 sheet, geol. map 1:24,000, 1983 [1984].

Klasner, J. S.; Kehn, T. M.; and Thompson, R. M. Mineral resource potential map of the Lusk Creek Roadless Area, Pope County, Illinois: U. S. Geol. Surv., Misc. Field Stud. Map, MF-1405-C, 19 p., econ. geol. map 1:32,000, 1983.

Klasner, J. S.; Kehn, T. M.; and Thompson, R. M. Mineral resource potential map of the Burden Falls Roadless Area, Pope County, Illinois: U. S. Geol. Surv., Misc. Field Stud. Map, MF-1565-C, 12 p., econ. geol. map, 1983.

Klasner, John S.; and Thompson, Robert M. Burden Falls Roadless Area, Illinois: in Wilderness mineral potential; assessment of mineral-resource potential in the U.S. Forest Service lands studied 1964-1984 (Marsh, S. P., editor; et al.), Geological Survey Professional Paper, Vol. 1300, p. 605-606, sketch map, 5 ref., 1984.

Klasner, John S.; and Thompson, Robert M. Lusk Creek Roadless Area, Illinois: in Wilderness mineral potential; assessment of mineral-resource potential in the U.S. Forest Service lands studied 1964-1984 (Marsh, S. P., editor; et al.), Geological Survey Professional Paper, Vol. 1300, p. 607-609, sketch map, 6 ref., 1984.

Klein, S.; Johnson, T. M.; and Cartwright, Keros. Moisture characteristics of compacted soils for use in trench covers: in Role of the unsaturated zone in radioactive and hazardous waste disposal (Mercer, James W.,

editor; et al.), Ann Arbor Sci. Publ., Ann Arbor, MI, United States, p. 101-111, illus. (incl. 1 table), 11 ref., 1983.

Kluessendorf, Joanne. Dolites at the Ordovician-Silurian boundary in Illinois [abstr.]: in North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. Campbell, chairperson), Abstracts with Programs - Geological Society of America, Vol. 15, No. 4, p. 221, March 1983.

Kluessendorf, Joanne see also Shaver, Robert H.

Knight, Kimbell L. Breezy Hill Limestone, a prelude to the major widespread Pennsylvanian cyclothems of Midcontinent North America [abstr.]: in North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. Campbell, chairperson), Abstracts with Programs - Geological Society of America, Vol. 15, No. 4, p. 257, March 1983.

Kolata, Dennis R. Maquoketa Shale Group of northern Illinois [abstr.]: in North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. Campbell, chairperson), Abstracts with Programs - Geological Society of America, Vol. 15, No. 4, p. 222, March 1983.

Kolata, Dennis R.; and Graese, Anne M. Lithostratigraphy and depositional environments of the Moquoketa Group (Ordovician) in northern Illinois: Circular - Illinois State Geological Survey, Vol. 528, 49 p., illus. (incl. sects., strat. cols., sketch maps; isopach maps 1:650,000), 60 ref., 1983.

Kolata, Dennis R.; Huff, Warren D.; and Frost, Joyce K. Correlation of K-bentonites in the Decorah Subgroup of the Mississippi Valley by chemical fingerprinting: in Ordovician Galena Group of the Upper Mississippi Valley; deposition, diagenesis, and paleoecology (Delgado, David J., editor), Annual Field Conference - Society of Economic Paleontologists and Mineralogists, Great Lakes Section, Vol. 13, p. F1-F15, illus. (incl. 2 tables, vert. cols., sketch/maps), 36 ref., 1983.

Kombrink, Mark; and Clayton, Robert N. Oxygen isotopic compositions of minerals from Illinois Deep Drill Hole granites: in Illinois Deep Hole Project (Anonymous), JGR, Journal of Geophysical Research, B, Vol. 88, No. 9, p. 7305-7306, 5 anal., 1 table, 14 ref., September 10, 1983.

Konecny, Jim; and Konecny, Sylvia. The Mazon Creek nodules: Bulletin of the Southern California Paleontological Society, Vol. 16, No. 3-4, p. 29-32, illus. (incl. sketch map), 7 ref., April 1984.

Konecny, Sylvia see Konecny, Jim

Kontis, A. L. see Signor, D. C.

Kosanke, Robert M.; and Peppers, Russel A. Spores from Chesterian coals of the Illinois Basin [abstr.]: in Geological Society of America, 94th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 13, No. 7, p. 490, September 1981.

Kowallis, Bart J.; and Wang, Herbert F. Microcrack study of granitic cores from Illinois deep borehole UPH 3: in Illinois Deep Hole Project (Anonymous), JGR. Journal of Geophysical Research. B, Vol. 88, No. 9, p. 7373-7380, illus. (incl. 2 tables), 15 ref., September 10, 1983.

Kravits, C. M.; and Crelling, John C. Effects of overbank deposition on the quality and maceral composition of the Herrin (No. 6) coal (Pennsylvanian) of southern Illinois: International Journal of Coal Geology, Vol. 1, No. 3, p. 195-212, illus. (incl. sketch map), 2 p. ref., 1981.

Kravits, Christopher M.; and Crelling, John C. The effects of overbank deposition on the quality and maceral composition of the Herrin (No. 6) Coal of southern Illinois [abstr.]: in The Geological Society of America, 93rd annual meeting, Abstracts with Programs - Geological Society of America, Vol. 12, No. 7, p. 465, August 1980.

Kreutzfeld, James E. Pore geometry and permeability of the St. Peter Sandstone in the Illinois Basin: Master's, 1982, Univ. of Toledo, Toledo, OH.

Krizek, Raymond J. see Vipulanandan, Cumaraswamy

Kruger, John M. see Anderson, Thomas F.

Kucera, E. T. see Harrison, W.

Kuecher, Gerald J. see Baird, Gordon C.

Kukalova-Peck, Jarmila; and Richardson, Eugene S., Jr. New Homiopteroidea (Insecta: Paleodictyoptera) with wing articulation from Upper Carboniferous strata of Mazon Creek, Illinois: Canadian Journal of Zoology = Journal Canadien de Zoologie, Vol. 61, No. 7, p. 1670-1687 (incl. French sum.), illus. (incl. 3 plates), 22 ref., July 1983.

Lacroix, Y. see Perez, J. Y.

Lane, N. Gary see Maliva, Robert G.

Langdon, W. M. see Nedved, T. K.

Lange, Rolf V. A petrographic study of the Backbone (Little Saline) Limestone (Lower Devonian) in southwestern Illinois and southeastern Missouri: 110 p., 1 plate, Master's, 61 ref., 1983, Southern Illinois Univ., Carbondale, IL.

Langenheim, Ralph L., Jr.; and Scheihing, Mark H. Detailed biostratigraphic correlation, Shumway "Cyclothem", Virgilian, Illinois Basin --[abstr.]: in North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. Campbell, chairperson), Abstracts with Programs - Geological Society of America, Vol. 15, No. 4, p. 265, March 1983. foraminifers, ostracods.

Larsen, Curtis E. see Collinson, Charles

Lazaro, T. R. (investigator). Long-term sediment yields from Bay Creek, Pike County, Illinois [abstr.]: Geological Survey Professional Paper, Vol. 1375, p. 160-161, 1983.

Lazaro, Timothy R.; Fitzgerald, Kathleen K.; and Frost, Leonard R., Jr. Estimates of long-term suspended-sediment loads in Bay Creek at Nebo, Pike County, Illinois, 1940-1980: Water-Resources Investigations, 22 p., illus. (incl. 5 tables, sketch maps), 7 ref., 1984. (Rep. No. WRI 84-4003) available from: U. S. Geol. Surv., Open-File Serv. Sect., West. Distrib. Branch, Fed. Cent., Denver, CO, United States.

Leary, Richard L. Lacoa with sporangia from Rock Island, Illinois [abstr.]: in Program and abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at Virginia Polytechnic Institution and State University (Gifford, Ernest M., editor), Miscellaneous Series Publication - Botanical Society of America, Vol. 156, p. 30, 1978.

Leary, Richard L. Topography and geology of the Early Pennsylvanian erosional surface on the northwest margin of the Illinois Basin, USA: in Biostratigraphy (Sutherland, Patrick K., editor; et al.), International Congress on Carboniferous Stratigraphy and Geology, 9 (Vol 2), p. 391-398, illus. (incl. sketch maps), 14 ref., 1984.

Ledvina, Christopher T. see Nelson, W. John

Lee, J. P. see Fang, J. H.

Lee, M. W. see Miller, John J.

Lee, Michael R.; and Matten, Lawrence C. Wood patterns in an Upper Cretaceous flora from southern Illinois [abstr.]: in Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at Arizona State University (Miller, Charles N., chairperson), American Journal of Botany, Vol. 61, No. 5, Suppl., p. 16-17, June 1974.

Leenheer, M. J. see Meyers, Philip A.

Lehr, Jay H. Editorial; Making peace with Mother Nature: Ground Water, Vol. 22, No. 1, p. 2-4, 1 ref., February 1984.

Lewis, B. G.; and McKiernan, M. Evaluation of soil tests as a measure of phosphorus and potassium availability in Illinois coal waste: *Journal of Environmental Quality*, Vol. 12, No. 3, p. 422-425, illus. (incl. 3 tables), 11 ref., September 1983.

Lidiak, Edward G.; and Denison, Rodger E. Petrology and physical properties of granites from the Illinois deep hole in Stephenson County: in *Illinois Deep Hole Project* (Anonymous), *JGR. Journal of Geophysical Research*, B, Vol. 88, No. 9, p. 7287-7299, illus. (incl. 39 anal., 3 tables), 28 ref., September 10, 1983.

Lin, D. L. see Grimmelmann, E. K.

Lineback, J. A.; Bleuer, N. K.; Mickelson, D. M. (compilers); et al. Quaternary geologic map of the Chicago 4 degrees by 6 degrees Quadrangle, United States: *Miscellaneous Investigations Series - U. S. Geological Survey*, I-1420 (NK-16), 1 sheet, geol. map 1:1,000,000, 1983 [1984]. Quaternary geologic atlas of the United States.

Lineback, Jerry A. see Killey, Myrna M.

Lizak, John B. Geologic structures and horizontal stresses; their impact on petroleum and coal production in Illinois Basin [abstr.]: in *AAPG Eastern Section meeting* (Anonymous), *AAPG Bulletin*, Vol. 67, No. 9, p. 1457, September 1983.

Loomis, Edward Charles. The effects of anaerobically digested municipal sanitary sewage sludge on the oxidation of pyrite: 129 p., Master's, 51 ref., 1981, Southern Illinois Univ., Carbondale, IL.

Lovely, Daniel Arthur. The application of remote sensing to the detection of Niagara pinnacle reefs in the Illinois Basin: 257 p., Master's, 1983, Purdue Univ., West Lafayette, IN.

Lozano, F. see Anuta, Paul

Ludvigson, Gregory A.; Bunker, Bill J.; Witzke, Brian J.; et al. A burial diagenetic model for the emplacement of zinc-lead sulfide ores in the Upper Mississippi Valley, USA: in *International conference on mississippi valley type lead-zinc deposits; proceedings volume* (Kisvarsanyi, Geza, editor; et al.), Univ. Mo. Rolla, Rolla, MO, United States, p. 497-515, illus. (incl. geol. sketch map), 56 ref., 1983.

Lueckenhoff, M. J. see Stephenson, Richard W.

Luengo, C. A. see Jesus Gonzalez, H.

Lumm, Donald K.; and Nelson, W. John. Structural geology of Shawneetown fault zone, southeastern Illinois [abstr.]: in *AAPG Eastern Section meeting* (Anonymous), *AAPG Bulletin*, Vol. 67, No. 9, p. 1457, September

1983.

Lumm, Donald K. see also Nelson, W. John
-- see also Strunk, Kevin L.

Lusk, Mark see Brugam, Richard B.

Lyons, Paul C. see Hatcher, Patrick G.

Mackey, G. W. see Foster, J. B.

Mades, D. M. see Gray, J. R.

-- see Stamer, J. K.

Mahaffy, James F. Morphology of *Microspermopteris* and occurrences in Middle Pennsylvanian coal balls [abstr.]: in *Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at Oregon State University* (Miller, Charles N., chairperson), *Botanical Soc. Am.*, Columbus, OH, United States, p. 22, 1975.

Mahaffy, James F. Spore patterns in the Indiana Coal V in the Middle Pennsylvanian near a paleochannel [abstr.]: in *Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at Oklahoma State University* (Heimsch, Charles, convener), *Miscellaneous Series Publication - Botanical Society of America*, Vol. 157, p. 33-34, 1979.

Malaret, E. see Anuta, Paul

Malinconico, Lawrence L., Jr. see Strunk, Kevin L.

Maliva, Robert G.; Hill, Jennifer E.; and Lane, N. Gary. Ophiocistoid (?) ossicles from the McCraney Limestone (Lower Mississippian) of western Illinois [abstr.]: in *North-central Section, the Geological Society of America, 17th annual meeting* (Craddock, J. Campbell, chairperson), *Abstracts with Programs - Geological Society of America*, Vol. 15, No. 4, p. 261, March 1983.

Mandle, R. L. see Signor, D. C.

Manger, Walter L.; and Sutherland, Patrick K. The Mississippian-Pennsylvanian boundary in the southern Midcontinent, United States: in *Biostratigraphy* (Sutherland, Patrick K., editor; et al.), *International Congress on Carboniferous Stratigraphy and Geology*, 9 (Vol 2), p. 369-376, illus. (incl. strat. cols., sketch map), 47 ref., 1984.

Maples, Christopher G. see Eggert, D. L.

-- see Kelly, Stuart M.

Marshall, F. C. see Brenckle, Paul L.

Maslowski, Andy. Frac sand remains important geological find: *AAPG Explorer*, Vol. 4, No.

11, p. 36-37, illus., August 1983.

Maslowski, Andy. Green pastures in Brown County: Northeast Oil Reporter, Vol. 4, No. 2, p. 17-19, illus. (incl. sketch map); March 1984.

Maslowski, Andy. Focus deepens in Illinois: Silurian reef search on the horizon: AAPG Explorer, Vol. 5, No. 8, p. 16-17, April 1984.

Maslowski, Andy. Challenging Northeast formations examined: Northeast Oil Reporter, Vol. 4, No. 4, p. 69-75, illus., May 1984.

Masters, John M. Geology of sand and gravel aggregate resources of Illinois: Illinois Mineral Note, Vol. 88, 10 p., illus. (incl. 1 table, geol. sketch maps), 20 ref., 1983.

Mathis, B. J.; and Cummings, T. E. Selected metals in river sediment, water, and animals: Journal - Water Pollution Control Federation, Vol. 45, No. 7, p. 1573-1583, illus. (incl. 7 tables, sketch map), 20 ref., July 1973.

Matten, Lawrence C. see Gastaldo, Robert A.

-- see Lee, Michael R.

McCall, D. C.; and Gardner, J. S. Litho-Density log applications in the Michigan and Illinois basins: Transactions of the SPWLA Annual Logging Symposium, Vol. 23, 21 p., illus., 2 ref., 1982.

McCallister, Robert H. see Shieh, Yuch-ning

McCrory, J. G.; Nowatzki, E. A.; Van Zyl, D.; et al. Low-level nuclear waste shallow land burial trench isolation; annual report; October 1982 - September 1983: NUREG/CR (United States. Nuclear Regulatory Commission), Vol. 3570, 51 p., illus. (incl. 13 tables), 18 ref., December 1983. available from: NTIS, Springfield, VA, United States.

McDonnell, Archie J. see Wirries, Dama L.

McDowell, R. C. see Morris, R. H.

McGillem, C. see Anuta, Paul

McGovney, James E. E. see Shaver, Robert H.

McHenry, J. Roger see Mitchell, J. Kent

McKeown, F. A.; Russ, D. P.; and Thenhaus, Paul C. Central Interior seismic source zones: summary of workshop convened June 10-11, 1980: in Summary of workshops concerning regional seismic source zones of parts of the conterminous United States, convened by the U.S. Geological Survey, 1979-1980, Golden, Colorado (Thenhaus, Paul C., editor). Geological Survey Circular, Vol. 0898, p. 19-24, 1 table, sketch maps, 1983.

McKiernan, M. see Lewis, B. G.

Mele, L. M. see Prodán, P. F.

Merrill, Glen K. Trace fossils within limestone interbeds, Oak Grove Member, Carbondale Formation (Pennsylvanian, Desmoinesian), northwestern Illinois [abstr.]: in AAPG annual convention with divisions SEPM/EMD/DPA, AAPG Bulletin, Vol. 67, No. 3, p. 513, March 1983.

Meyers, Philip A.; Leenheer, M. J.; and Eadie, Brian J. Organic matter alterations during sinking of sediment particles in Lake Michigan [abstr.]: in North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. Campbell, chairperson). Abstracts with Programs - Geological Society of America, Vol. 15, No. 4, p. 217, March 1983.

Mickelson, D. M. see Lineback, J. A.

Mikulic, Donald G. see Shaver, Robert H.

Millay, M. A.; and Eggert, D. A.

Microgametophyte development in the Paleozoic seed fern family Callistophytaceae: American Journal of Botany, Vol. 61, No. 10, p. 1067-1075, illus., 48 ref., December 1974.

Millay, M. A.; and Taylor, T. N. An unusual botryopterid sporangial aggregation from the Middle Pennsylvanian of North America: American Journal of Botany, Vol. 67, No. 5, p. 758-773, illus., 28 ref., June 1980.

Millay, Michael A. Acaulangium gen. n., a fertile marattialean from the Upper Pennsylvanian of Illinois: American Journal of Botany, Vol. 64, No. 2, p. 223-229, 14 ref., February 1977.

Millay, Michael A. A new taxon of fertile marattialean foliage [abstr.]: in Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at Oklahoma State University (Heimsch, Charles, convener), Miscellaneous Series Publication - Botanical Society of America, Vol. 157, p. 35, 1979.

Miller, Halsey W. Petroleum geology of Macoupin County, Illinois [abstr.]: in AAPG Eastern Section meeting (Anonymous), AAPG Bulletin, Vol. 67, No. 9, p. 1457, September 1983.

Miller, John J.; Speirer, Robert A.; Lee, M. W.; et al. Detection of potential inundation hazards by overwater seismic methods: Open-File Report (United States Geological Survey, 1978), 45 p., illus. (incl. 2 tables, sketch maps), 7 ref., 1984. (Rep. No. OF 84-0153) available from: U. S. Geol. Surv., Open-File Serv. Sect., West. Distrib. Branch, Fed. Cent., Denver, CO, United States.

Mitchell, J. Kent; Mostaghimi, Saied; Freeny, Dale S.; et al. Sediment deposition estimation from cesium-137 measurements: Water Resources Bulletin (Baton Rouge), Vol.

19, No. 4, p. 549, August 1983. Water Resour. Bull., Pap. No. 83023.

-- Mitchell, J. Kent see also Mostaghimi, Saeid
Montgomery, C. W. see Hoppe, W. J.

Montgomery, Carla W. see van Schmus, W. R.

Morris, R. H.; Hait, M. H., Jr.; Algermissen, S. T. (investigators); et al. Reactor site reviews [abstr.]: Geological Survey Professional Paper, Vol. 1375, p. 223, 1983.

Morse, Walter J. see Johnson, Thomas M.

Mostaghimi, Saeid; and Mitchell, J. Kent. Erosion characteristics of surface-mined soils: in Proceedings, 1983 symposium on surface mining, hydrology, sedimentology, and reclamation (Graves, Donald H., editor), Bulletin Series - Office of Engineering Services, University of Kentucky, Vol. 133, p. 537-541, illus. (incl. 4 tables), 14 ref., November 1983.

Mostaghimi, Saeid see also Mitchell, J. Kent

Moteff, J. D. see Zielinski, R. E.

Munson, D. E. see Sutherland, H. J.

Naymik, Thomas G. see Barcelona, Michael J.

Nedved, T. K.; Fochtman, E. G.; Langdon, W. M.; et al. Lithium silicate sedimentation tracer for shoal deposit studies: Journal - Water Pollution Control Federation, Vol. 45, No. 5, p. 896-904, illus. (incl. 1 table, sketch maps), 1 ref., May 1973.

Nelson, Dorothy A.; and Sauer, Norman J. An evaluation of postdepositional changes in the trace element content of human bone: American Antiquity, Vol. 49, No. 1, p. 141-147, illus. (incl. 1 table), 17 ref., January 1984.

Nelson, Robert S. see Reinertsen, David L.

Nelson, W. John. Tectonic faults and their influence on coal mining in Illinois [abstr.]: in The Geological Society of America, 94th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 13, No. 7, p. 518, September 1981.

Nelson, W. John. The Turner Mine Shale Member: a newly named stratigraphic unit of the Carbondale Formation: in Geologic notes, Circular - Illinois State Geological Survey, Vol. 529, p. 11-12, strat. col., 1983.

Nelson, W. John. Geologic disturbances in Illinois coal seams: Circular - Illinois State Geological Survey, Vol. 530, 47 p., illus. (incl. sects., geol. sketch maps), 70 ref., 1983.

Nelson, W. John; and Demaris, Philip J. Strike-slip fault in flat-lying strata of

Macoupin County, Illinois [abstr.]: in North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. -- Campbell, chairperson), Abstracts with Programs - Geological Society of America, Vol. 15, No. 4, p. 229, March 1983.

Nelson, W. John; and Ledvina, Christopher T. A gravitational slide in the Energy Shale Member overlying the Herrin (No. 6) Coal Member in southern Illinois: in Part 1, Atlantic Coast basins; Part 2, Paleogeography and paleotectonics; Part 3, Sedimentology and geochemistry (Geldsetzer, Helmut H. J., editor; et al.), International Congress on Carboniferous Stratigraphy and Geology, Vol. 9, No. 3, p. 303-315, illus. (incl. sect., strat. col., sketch maps), 17 ref., 1984.

Nelson, W. John; and Lumm, Donald K. Tectonic history of southeastern Illinois [abstr.]: in AAPG Eastern Section meeting (Anonymous), AAPG Bulletin, Vol. 67, No. 9, p. 1458, September 1983.

Nelson, W. John see also Danner, Stephen K.

-- see also DeMaris, Philip J.

-- see also Lumm, Donald K.

-- see also Strunk, Kevin L.

Nienkerk, Monte M. see Flemal, Ronald C.

Niklas, Karl J.; and Phillips, Tom L. Chemical analyses of a vertical sample of Herrin (No. 6) Coal Member [abstr.]: in Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at Arizona State University (Miller, Charles N., chairperson), American Journal of Botany, Vol. 61, No. 5, Suppl., 17-18 p., June 1974.

Norby, Rodney D. see Collinson, Charles

Nowatzki, E. A. see McCray, J. G.

Nunn, Jeffrey A.; and Sleep, Norman H. Thermal contraction and flexure of intracratonal basins: a three-dimensional study of the Michigan Basin: The Geophysical Journal of the Royal Astronomical Society, Vol. 76, No. 3, p. 587-635, illus. (incl. 4 tables, strat. col., charts, sects., sketch maps), 131 ref., March 1984.

Obermeier, Stephen F. Liquefaction potential in the central Mississippi Valley: Open-File Report (United States Geological Survey, 1978), 73 p., illus. (incl. 6 tables, sketch map), 40 ref., 1984. (Rep. No. OF 84-0515) available from: U. S. Geol. Surv., Open-File Serv. Sect., West. Distrib. Branch, Fed. Cent., Denver, CO, United States.

O'Connell, Dennis B. Paleoecology and environments of deposition of the Brereton Limestone Member (Pennsylvanian, Desmoinesian)

in southwestern Illinois: 121 p., 16 plates, Master's, 24 ref., 1983, Southern Illinois Univ., Carbondale, IL. *foraminifers, ostracods.*

O'Connell, Dennis B.; and Utgaard, John. Biofacies and habitats of Brereton Limestone Member (Carbondale Formation, Middle Pennsylvanian), southwestern Illinois [abstr.]: in AAPG Eastern Section meeting (Anonymous), AAPG Bulletin, Vol. 67, No. 9, p. 1458, September 1983.

O'Connor, J. Y. see Baliga, K. Y.

Oertel, Allen O.; and Hood, William C. Changes in ground water quality associated with cast overburden material in Southwest Perry County, Illinois: in Proceedings, 1983 symposium on surface mining, hydrology, sedimentology, and reclamation (Graves, Donald H., editor). Bulletin Series - Office of Engineering Services, University of Kentucky, Vol. 133, p. 73-79, illus. (incl. 1 table, sketch map), 16 ref., November 1983.

Olhoeft, Gary R. see Daniels, Jeffrey J.

Olimpio, J. C. Low-level radioactive-waste burial at the Palos Forest Preserve, Illinois; geology and hydrology of the glacial drift, as related to the migration of tritium: Geological Survey Water-Supply Paper (Washington), Vol. 2226, 34 p., illus. (incl. 6 tables, sketch maps), 14 ref., 1984.

Olimpio, J. C. (investigator). Radionuclide movement at a radioactive-waste burial site in Illinois [abstr.]: Geological Survey Professional Paper, Vol. 1375, p. 235, 1983.

Palmer, James E. see Trask, C. Brian

Parizek, Richard R. see Filley, Thomas H.

Peart, D. B. see Zuehls, E. E.

Peppers, R. A. see Eggert, D. L.

Peppers, Russel A. Comparison of miospore assemblages in the Pennsylvanian System of the Illinois Basin with those in the Upper Carboniferous of Western Europe: in Biostratigraphy (Sutherland, Patrick K., editor; et al.), International Congress on Carboniferous Stratigraphy and Geology, 9 (Vol 2), p. 483-502, illus. (incl. 1 plate), 53 ref., 1984.

Peppers, Russel A. see also Kosanke, Robert M.

-- see also Trask, C. Brian

Perez, J. Y.; Davidson, R. R.; and Lacroix, Y. Chemical grouting test programme for Mississippi River locks and dam 26: Geotechnique, Vol. 32, No. 3, p. 217-233 (incl. French sum.), illus. (incl. 4 tables), 3 ref., 1982.

Perkins, D. M. see Morris, R. H.

Peters, C. A. (investigator). Mine-reclamation -- hydrology in Fulton County, Illinois [abstr.]: Geological Survey Professional Paper, Vol. 1375, p. 225, 1983.

Peters, C. A. see also Fitzgerald, K. K.

Phillips, Donald B.; and Goddard, Tyrone M. Soil survey of Bond County, Illinois: U. S. Dep. Agric., Soil Conserv. Serv., 181 p., illus. (incl. 19 tables, sketch map; soils maps 1:190,080; colored soils maps 1:15,840), 18 ref., 1983. (In coop. with Ill. Agric. Exp. Station).

Phillips, T. L. see Eggert, D. L.

Phillips, Tom L. see Niklas, Karl J.

Pigg, Kathleen B.; and Taylor, Thomas N. Cormose lycopod bases from Mazon Creek and the phylogeny of the lycopods [abstr.]: in Ohio Academy of Science; 93rd annual meeting (Elfner, Lynn Edward, editor), The Ohio Journal of Science, Vol. 84, No. 2, p. 7, March 30, 1984.

Pinckney, Darrell M. Continental rifting under the Illinois Basin and Mississippi River embayment: in Part 1, Atlantic Coast basins; Part 2, Paleogeography and paleotectonics; Part 3, Sedimentology and geochemistry (Geldsetzer, Helmut H. J., editor; et al.), International Congress on Carboniferous Stratigraphy and Geology, Vol. 9, No. 3, p. 316-328, illus. (incl. 1 table, strat. col., sketch maps), 36 ref., 1984.

Pinckney, Darrell M. see also Richardson, Catherine K.

Pincus, Howard J. see Allen, Robert D.

Pittman, Jon T. Stalking the wild fluorspar: Jewelry Making Gems & Minerals, Vol. 550, p. 14-15, 30-31, 55, 68-69, illus. (incl. sketch map), August 1983.

Pittman, Jon T. Honeycomb calcite and other Ohio Valley delights: Jewelry Making Gems & Minerals, Vol. 556, p. 10-14, illus., February 1984.

Ponsetto, Louis R. see Carpenter, G. L.

Pope, John K. see Fluegeman, Richard H., Jr.

Pray, Lloyd C. see Shaver, Robert H.

Prodan, P. F.; Mele, L. M.; and Schubert, J. P. Runoff water quality and hydrology at coal refuse disposal sites in southern Illinois: in Proceedings, 1982 symposium on surface mining, hydrology, sedimentology, and reclamation (Graves, Donald H., editor), Univ. Ky., Lexington, KY, United States, Vol. UKY BU129, p. 57-63, illus. (incl. 2 tables, sketch maps), 13 ref., December 1982.

Ramanujam, C. G. K.; Rothwell, Gar W.; and Stewart, Wilson N. Probable attachment of the *Dolerotheca campanulum* to a *Myeloxylon-Alethopteris* type frond: American Journal of Botany, Vol. 61, No. 10, p. 1057-1066, illus., 29 ref., December 1974.

Reinbold, Mark L. Facies, formation boundaries, and chronostratigraphy in the upper part of the New Albany Shale Group (Devonian-Mississippian) in the Illinois Basin: in Part 1, Atlantic Coast basins; Part 2, Paleogeography and paleotectonics; Part 3, Sedimentology and geochemistry (Geldsetzer, Helmut H. J., editor; et al.), International Congress on Carboniferous Stratigraphy and Geology, Vol. 9, No. 3, p. 427-442, illus. (incl. 1 table, sect., strat. cols., sketch maps), 48 ref., 1984.

Reinertsen, David L. A guide to the geology of the Cave in Rock-Rosiclar area: Ill. Dep. Energ. and Nat. Resour., State Geol. Surv. Div., Champaign, IL, United States, variously paginated, illus. (incl. strat., cols., tables, geol. sketch maps), November 6, 1982. (Field Trip 1982 D). Field trip on Nov. 6, 1982.

Reinertsen, David L. A guide to the geology of the Golconda area: Ill. Dep. Energ. and Nat. Resour., Geol. Surv. Div., Champaign, IL, United States, variously paginated, illus. (incl. strat. cols., geol. sketch maps), November 5, 1983. (Field Trip 1983D). Field trip on Nov. 5, 1983.

Reinertsen, David L.; and Nelson, Robert S. A guide to the geology of the Danvers-Normal area: Field Trip Guide Leaflet - Illinois State Geological Survey, 1982C, variously paginated, illus. (incl. sects., strat. cols., geol. sketch maps), October 23, 1982.

Reinertsen, David L. see also Berg, Richard C.

Rexroad, Carl B. see Eggert, D. L.

Rhodes, F. H. T.; and Austin, Ronald L. Natural assemblages of elements; interpretation and taxonomy: in Miscellanea; Supplement 2, Conodonts (Robison, R. A., editor; et al.), Geol. Soc. Am., Boulder, CO, United States, Univ. Kans., Lawrence, KS, United States, Vol. Part W, p. W68-W78, illus., 1981.

Richardson, Catherine K.; and Pinckney, Darrell M. Temperature and salinity variations during ore deposition at the Deardorff Mine, Cave-in-Rock District, Illinois [abstr.]: in The Geological Society of America, 94th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 13, No. 7, p. 538, September 1981.

Richardson, Eugene S., Jr. see Kukalova-Peck, Jarmila

Richmond, G. M. see Lineback, J. A.

Rockaway, J. D. see Stephenson, Richard W.

Rogers, Philip R. Roof fall study of the Harrisburg (No. 5) Coal in portions of Saline and Williamson counties, Illinois: 66 p., 3 plates, Master's, 38 ref., 1981, Southern Illinois Univ., Carbondale, IL.

Roman, Juan A. Deliz. Shallow seismic refraction survey, Gallatin County, Illinois: 113 p., Master's, 10 ref., 1983, Southern Illinois Univ., Carbondale, IL.

Rosholt, J. N.; and Huestis, G. M. Uranium-series disequilibrium in granite from core samples of drill hole UPH-3, Stephenson County, Illinois [abstr.]: in The Geological Society of America, 94th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 13, No. 7, p. 541, September 1981.

Rosholt, J. N. (investigator). Isotopic composition of uranium and thorium in crystalline rocks [abstr.]: Geological Survey Professional Paper, Vol. 1375, p. 148, 1983.

Rosholt, John N. Isotopic composition of uranium and thorium in crystalline rocks: in Illinois Deep Hole Project (Anonymous), JGR. Journal of Geophysical Research, B, Vol. 88, No. 9, p. 7315-7330, illus. (incl. 84 anal., 2 tables), 53 ref., September 10, 1983.

Rothwell, Gar W. The taxonomy of *Conostoma leptospermum* and *C. platyspermum* [abstr.]: in Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at Michigan State University (Luteyn, James L., editor; et al.), Miscellaneous Series Publication - Botanical Society of America, Vol. 154, p. 42, May 1977.

Rothwell, Gar W. see also Basinger, James F.

-- see also Eggert, D. A.

-- see also Ramanujam, C. G. K.

Rubin, Meyer see Conard, Nicholas

Ruhe, Robert V. Clay minerals in thin loess, Ohio River basin, U.S.A. [abstr.]: International Congress on Sedimentology = Congres International de Sedimentologie, Vol. 11, p. 62-63, 1982.

Russ, D. P. see McKeown, F. A.

Russell, S. J. see Fiene, F. L.

Ryan, G. L. see Zuehls, E. E.

Sasman, Robert T.; and Schicht, Richard J. To mine or not to mine groundwater: Journal - American Water Works Association, Vol. 70, No. 3, p. 156-161, illus. (incl. sketch maps, 5 tables), 8 ref., March 1978.

Sauer, Norman J. see Nelson, Dorothy A.

Schafers, C. J. see Chapman, W. L.

Scheihing, Mark H. see Langenheim, Ralph L., Jr.

Schicht, Richard J. see Sasman, Robert T.

Schroeder, P. A. see Dahl, H. M.

Schubert, J. P. see Prodan, P. F.

Schulz, Klaus J. Trace element geochemistry of Precambrian granite from northern Illinois Deep Drill Hole UPH-3 [abstr.]: in The Geological Society of America, 94th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 13, No. 7, p. 549, September 1981.

Schwalb, Howard R. History of displacement along Ste. Genevieve fault zone, southwestern Illinois [abstr.]: in AAPG Eastern Section meeting (Anonymous), AAPG Bulletin, Vol. 67, No. 9, p. 1459, September 1983.

Schwalb, Howard R. Structural history of southern Illinois and upper Mississippi Embayment [abstr.]: in AAPG Eastern Section meeting (Anonymous), AAPG Bulletin, Vol. 67, No. 9, p. 1459, September 1983.

Scott, James H. see Daniels, Jeffrey J.

Searight, Thomas K. Geologic history of the Mackinaw Member of the Henry Formation in the Illinois River valley in Tazewell County, Illinois: Transactions of the Illinois State Academy of Science, Vol. 76, No. 3-4 (3 & 4), p. 311-320, sects., sketch maps, 16 ref., 1983.

Seitz, Martin G. see Couture, Rex A.

Seyler, Beverly J. Stratigraphic traps and deposition of Aux Vases and uppermost Ste. Genevieve formations (Mississippian), southern Illinois [abstr.]: in AAPG Eastern Section meeting (Anonymous), AAPG Bulletin, Vol. 67, No. 9, p. 1459, September 1983.

Shabica, Charles W. see Baird, Gordon C.

Shadle, Gary L.; and Stidd, Benton M. The frond of Heterangium: American Journal of Botany, Vol. 62, No. 1, p. 67-75, illus., 16 ref., January 1975.

Shaffer, Nelson R. see Chen, Pei-Yuan

Shaver, Robert H.; Sunderman, Jack A.; Mikulic, Donald G.; et al. Silurian reef and interreef strata as responses to a cyclical succession of environments, southern Great Lakes area (Field trip 12): in Field trips in Midwestern geology; Volume 1 (Shaver, Robert H., editor; et al.), Indiana Geol. Surv., Bloomington, IN, United States, p. 141-196, illus. (incl. sects., strat. cols., geol. sketch map), 74 ref., 1983. ostracods, conodonts.

Shaver, Robert H.; and Sunderman, Jack A. (editors). Field trips in Midwestern geology: Indiana Geol. Surv., Bloomington, IN, United States; 491 p., illus. (incl. sects., strat. cols., geol. sketch maps; colored hydrogeol. map 1:138,000), 1983. In two volumes; sponsored by Geol. Soc. Am., Indiana Geol. Surv. and Indiana Univ. Dep. Geol.; Geol. Soc. Am. and affiliated societies, 1983 annual meeting, Indianapolis, IN; individual papers are cited separately.

Shelby, Lynn. A comparison of linear mapped from digitally processed Landsat data to faults depicted on geologic maps; the fluorspar district, western Kentucky and southern Illinois: 88 p., 1 plate, Master's, 59 ref., 1982, Murray State Univ., Murray, KY.

Shieh, L. C. see Bohn, M. P.

Shieh, Yuch-Ning. Oxygen isotope study of Precambrian granites from the Illinois Deep Hole Project: in Illinois Deep Hole Project (Anonymous), JGR. Journal of Geophysical Research, B, Vol. 88, No. 9, p. 7300-7304, illus. (incl. 44 anal., 1 table), 18 ref., September 10, 1983.

Shieh, Yuch-ning; and McCallister, Robert H. Oxygen isotopic and mineralogic studies of Precambrian granites from the Illinois Deep Hole Project [abstr.]: in The Geological Society of America, 94th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 13, No. 7, p. 553, September 1981.

Shiley, Richard H. see Cahill, Richard A.

Shimp, Neil F. see Cahill, Richard A.

Signor, D. C.; Kontis, A. L.; Jorgensen, D. G.; et al. Ground-water flow regime based on preliminary data for regional aquifer systems [abstr.]: in American Geophysical Union; 1980 Fall meeting (Anonymous), Eos, Transactions, American Geophysical Union, Vol. 61, No. 46, p. 952, November 11, 1980.

Singh, Krishan P.; and Snorrason, Arni. Sensitivity of outflow peaks and flood stages to the selection of dam breach parameters and simulation models: in Global water; science and engineering; the Ven Te Chow memorial volume (Stout, Glenn E., editor; et al.), Journal of Hydrology, Vol. 68, No. 1-4, p. 295-310, illus. (incl. 5 tables), 9 ref., February 1984.

Sleep, Norman H. see Nunn, Jeffrey A.

Snorrason, Arni see Singh, Krishan P.

Speirer, Robert A. see Miller, John J.

Stamer, J. K.; and Mades, D. M. Work plan for the Sangamon River basin, Illinois: Open-File Report (United States Geological Survey, 1978), 31 p., illus. (incl. 5 tables, sketch

map), 23 ref., 1982. (Rep. No. 82-0693) available from: U. S. Geol. Surv., Open-File Serv. Sect., West. Distrib. Branch, Fed. Cent., Denver, CO, United States.

Starks, T. H. see Fang, J. H.

Steele, J. D. see Chou, C. L.

-- see Frost, J. K.

Steindler, Martin J. see Couture, Rex A.

Stephenson, Richard W.; Lueckenhoff, M. J.; and Rockaway, J. D. In-situ monitoring of coal mine floor heave: in International symposium on in situ testing of soils and rocks and performance of structures (Garde, R. J., chairperson), Sarita Prakashan, New Delhi, India, p. 448-455, illus., 1979.

Stewart, Wilson N. see Basinger, James F.

-- see Ramanujam, C. G. K.

Stidd, Benton M. The synangiate nature of Dolerotheca: American Journal of Botany, Vol. 65, No. 2, p. 243-245, illus., 3 ref., February 1978.

Stidd, Benton M. An anatomically preserved Potonia with in situ spores from the Pennsylvanian of Illinois: American Journal of Botany, Vol. 65, No. 6, p. 677-683, illus., 18 ref., July 1978.

Stidd, Benton M. see also Dufek, Debra A.

-- see also Shadle, Gary L.

Stiles, L. H. see Barber, A. H., Jr.

Stohr, Christopher J. see Johnson, Thomas M.

Strunk, Kevin L.; Malinconico, Lawrence L., Jr.; Nelson, W. John; et al. Structural relationships between Cottage Grove and Shawneetown fault systems, southeastern Illinois, as inferred from gravity data [abstr.]: in AAPG Eastern Section meeting (Anonymous), AAPG Bulletin, Vol. 67, No. 9, p. 1460, September 1983.

Stuckless, J. S.; Doe, B. R.; and Delevaux, M. U-Th-Pb isotope systematics and uranium distribution within granite recovered from drill-hole UPH-3, northern Illinois [abstr.]: in The Geological Society of America, 94th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 13, No. 7, p. 562, September 1981. 1460 m.y.

Stuckless, J. S. see also Doe, Bruce R.

Stutzman, Paul E. Non-marine and marine influenced Herrin Coal and associated roof shales from southern Illinois: a mineralogical and statistical analysis: 103 p., Master's, 58 ref., 1983, Southern Illinois Univ., Carbondale, IL.

Sullivan, F. O. see Nedved, T. K.

Sunderman, Jack A. see Shaver, Robert H.

Sutherland, H. J.; and Munson, D. E. Prediction of subsidence using complementary influence functions: International Journal of Rock Mechanics and Mining Sciences & Geomechanics Abstracts, Vol. 21, No. 4, p. 195-202, illus., 15 ref., August 1984.

Sutherland, Patrick K. see Manger, Walter L.

Taylor, T. N. see Millay, M. A.

Taylor, Thomas N. see Pigg, Kathleen B.

Teerman, Stanley C. see Crelling, John C.

Thenhaus, P. C. see Morris, R. H.

Thenhaus, Paul C. see McKeown, F. A.

Thomas, Bruce D. see Howell, James C.

Thompson, B. B. see Barber, A. H., Jr.

Thompson, Carolyn L. see Hatcher, Patrick G.

Thompson, G. M. see McCray, J. G.

Thompson, R. M. see Klasner, J. S.

Thompson, Robert M. see Klasner, John S.

Thompson, Thomas L. Late Cretaceous marine foraminifers from Pleistocene fluviolacustrine deposits in eastern Missouri: Journal of Paleontology, Vol. 57, No. 6, p. 1304-1310, illus. (incl. geol. sketch map), 37 ref., November 1983.

Thompson, Thomas L. Mississippian stratotype: an overview: in Biostratigraphy (Sutherland, Patrick K., editor; et al.), International Congress on Carboniferous Stratigraphy and Geology, 9 (Vol 2), p. 235-246, strat. cols., sects., sketch maps, 34 ref., 1984.

Tirey, G. B.; Wise, R. A.; and Winget, E. A. Common-depth-point seismic-reflection survey on the Mississippi River in the vicinity of Alton, Illinois: Open-File Report (United States Geological Survey, 1978), 19 p., illus. (incl. sketch map), 5 ref., 1984. (Rep. No. 84-0081) available from: U. S. Geol. Surv., Open-File Serv. Sect., West. Distrib. Branch, Fed. Cent., Denver, CO, United States.

Tirey, G. B. see also Winget, E. A.

Tome, C. see Harrison, W.

Torriani, I. L. see Jesus Gonzalez, H.

Trask, C. Brian; Palmer, James E.; and Peppers, Russel A. Revision of nomenclature for the Springfield (No. 5) Coal Member of Illinois: in Geologic notes, Circular - Illinois State Geological Survey, Vol. 529, p. 7-10, illus.

(incl. 1 table, geol. sketch map), 23 ref., 1983. *Pennsylvanian*.

Trask, C. Brian see also Jacobson, Russell J.

Tsui, T. F. see Fiene, F. L.

Utgaard, John see Burk, Mitchell Keith

-- see Guzan, Michael J.

-- see O'Connell, Dennis B.

Vagt, Peter J. Vertical and horizontal stability of streams in northern Illinois: 139 p., 1 plate, Master's, 85 ref., 1982, Northern Illinois Univ., DeKalb, IL.

Valdes, J. see Anuta, Paul

Valenzuela, C. see Anuta, Paul

Van Den Berg, Jacob see Carpenter, G. L.

Van Loon, L. S. see Harrison, W.

Van Luik, A. see Harrison, W.

van Schmus, W. R.; Hoppe, W. J.; and Montgomery, Carla W. Age and geologic significance of Precambrian basement samples from northern Illinois and eastern Iowa [abstr.]: in The Geological Society of America, 94th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 13, No. 7, p. 572, September 1981. 1.48 b.y.

Van Schmus, W. R. see also Coates, M. S.

-- see also Hoppe, W. J.

Van Zyl, D. see McCray, J. G.

Vipulanandan, Cumaraswamy; and Krizek, Raymond J. Quality of runoff water from soil-covered reclamation sites: in Proceedings, 1983 symposium on surface mining, hydrology, sedimentology, and reclamation (Graves, Donald H., editor), Bulletin Series - Office of Engineering Services, University of Kentucky, Vol. 133, p. 225-232, illus. (incl. 1 table), 6 ref., November 1983.

Vipulanandan, Cumaraswamy; Krizek, Raymond J.; and Wilkey, Michael L. Erosion model for reclamation areas: in Proceedings, 1982 symposium on surface mining, hydrology, sedimentology, and reclamation (Graves, Donald H., editor), Univ. Ky., Lexington, KY, United States, Vol. UKY BU129, p. 339-348, illus. (incl. 2 tables), 6 ref., December 1982.

Visocky, A. P. see Cartwright, K.

Vitaliano, C. J. see Eckstein, Y.

Vogel, R. S. see Chou, C. L.

von Rhee, Robert W.; and Johnson, W. Hilton. Lithofacies in the Batestown Till Member,

Wedron Formation at two sites in eastern Illinois [abstr.]: in North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. Campbell, chairperson), Abstracts with Programs - Geological Society of America, Vol. 15, No. 4, p. 223, March 1983.

Walker, William H. Illinois ground water pollution: Journal - American Water Works Association, Vol. 61, No. 1, p. 31-40, illus. (incl. sketch maps), 16 ref., January 1969. Paper presented at the Am. Water Works Assoc., Ill. Sect. meeting in Chicago, IL, March 13, 1968.

Waller, S. F. see Brenckle, Paul L.

Wang, H. F.; and Christensen, N. I. Seismic velocities of lower Paleozoic stratigraphic units in Stephenson County, Illinois [abstr.]: in North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. Campbell, chairperson), Abstracts with Programs - Geological Society of America, Vol. 15, No. 4, p. 219, March 1983.

Wang, Herbert F. see Kowallis, Bart J.

Wangsness, D. J. Hydrology of area 30, eastern region, Interior Coal Province, Indiana and Illinois: Open-File Report (United States Geological Survey, 1978), 82 p., 1982. (Rep. No. 82-1005) available from: U. S. Geol. Surv., Water Resour. Div., Indianapolis, IN, United States.

Watts, Alice Marie. Fluorite, the magical mineral: Lapidary Journal, Vol. 38, No. 6, p. 806-811, illus., September 1984.

Weiss, Malcolm P. see Dathe, David B.

Wells, J. E. see Bohn, M. P.

Westgate, Linda M.; and Anderson, Thomas F. Stable isotope evidence for the origin of sulfur in coal [abstr.]: in The Geological Society of America, 94th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 13, No. 7, p. 579, September 1981.

Whelan, Joseph F.; and Cobb, James C. High-Zn-coals of Illinois; coal-hosted mississippi valley-type mineralization? [abstr.]: in The Geological Society of America, 94th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 13, No. 7, p. 579, September 1981.

Wiant, Michael D. see Conard, Nicholas

Wickham, Susan Specht; and Johnson, W. Hilton. The Tiskilwa Till, a regional view of its origin and depositional processes: in Proceedings of the symposium on processes of glacier erosion and sedimentation (Gold, L. W., editor; et al.), Annals of Glaciology,

Vol. 2, p. 176-182, illus. (incl. 2 tables, sketch map), 16 ref., 1981.

Wilhelm, M.-H. see Brenckle, Paul L.

Wilkey, Michael L. see Vipulanandan, Cumaraswamy

Wilkin, Donovan C.; and Hebel, Susan J. Sediment sources of Midwestern surface waters: *in Proceedings of the 1981 meetings of the American Water Resources Association, Arizona Section and the Arizona Academy of Science, Hydrology Section (Anonymous). Hydrology and Water Resources in Arizona and the Southwest*, Vol. 11, p. 13-17, illus., 3 ref., 1981.

Wilkin, Donovan C.; and Hebel, Susan J. Techniques for studying nonpoint water quality: *in Proceedings of the 1982 meetings of the American Water Resources Association, Arizona Section and the Arizona-Nevada Academy of Science, Hydrology Section (Anonymous). Hydrology and Water Resources in Arizona and the Southwest*, Vol. 12, p. 117-121, illus. (incl. 1 table, sketch map), 3 ref., 1982.

Winfree, K. E.; Dott, R. H., Jr.; and Byers, Charles W. Depositional environments of the St. Peter Sandstone of the Upper Midwest [abstr.]: *in North-central Section, the Geological Society of America, 17th annual meeting (Craddock, J. Campbell, chairperson), Abstracts with Programs - Geological Society of America*, Vol. 15, No. 4, p. 214, March 1983.

Winget, E. A.; and Tirey, G. B. U.S. Geological Survey common-depth-point seismic-reflection survey between Mississippi River miles 195 and 210 (R/V Neecho, cruise NE-80-3): Open-File Report (United States Geological Survey, 1978), 5 p., sketch maps, 2 ref., 1984. (Rep. No. OF 84-0082) available from: U. S. Geol. Surv., Open-File Serv. Sect., West. Distrib. Branch, Fed. Cent., Denver, CO, United States.

Winget, E. A. see also Tirey, G. B.

Wirries, Dama L.; and McDonnell, Archie J. Drainage quality at deep coal mine sites: *Water Resources Bulletin (Urbana)*, Vol. 19, No. 2, p. 235-240, illus. (incl. 3 tables, sketch map), 16 ref., April 1983. *Water Resour. Bull.*, Pap. No. 82056.

Wise, R. A. see Tirey, G. B.

Witzke, Brian J. see Ludvigson, Gregory A.

Woodland, Bertram G. Fabric of the clastic component of Carboniferous concretions and their enclosing matrix: *in Part 1, Atlantic Coast basins; Part 2, Paleogeography and paleotectonics; Part 3, Sedimentology and geochemistry (Geldsetzer, Helmut H. J., editor; et al.), International Congress on Carboniferous Stratigraphy and Geology*, Vol. 9, No. 3, p. 694-701, illus., 22 ref., 1984.

Young, Victor R. Drowned barrier bar and tidal inlet sequences in Buckner-Sesser-Valier fields, Franklin County, Illinois [abstr.]: *in AAPG Eastern Section meeting (Anonymous), AAPG Bulletin*, Vol. 67, No. 9, p. 1460-1461, September 1983.

Zielinski, R. E.; and Motteff, J. D. Physical and chemical characterization of Devonian gas shale; quarterly status report October 1, 1980-December 31, 1980: 276 p., 1980. (Rep. No. MLM-NU-81-53-0002) available from: NTIS, Springfield, VA, United States.

Zimmermann, R. A.; and Amstutz, G. C. Barite, its place and role in mississippi valley-type deposits: *in International conference on mississippi valley type lead-zinc deposits; proceedings volume (Kisvarsanyi, Geza, editor; et al.), Univ. Mo. Rolla, Rolla, MO, United States*, p. 279-288, illus., 27 ref., 1983.

Zimmermann, Robert A. Where have all the sediments gone? fission track dating of the Illinois Deep Hole core [abstr.]: *in The Geological Society of America, 94th annual meeting, Abstracts with Programs - Geological Society of America*, Vol. 13, No. 7, p. 588, September 1981. 130, 50 m.y.

Zuehlis, E. E.; Ryan, G. L.; Peart, D. B.; et al. Hydrology of area 25, Eastern Region, Interior Coal Province, Illinois: Open-File Report (United States Geological Survey, 1978), 79 p., 1981. (Rep. No. 81-0636) available from: U. S. Geol. Surv., Urbana, IL, United States.

Zuehlis, E. E. (investigator). Hydrology and water quality in coal areas of Illinois [abstr.]: *Geological Survey Professional Paper*, Vol. 1375, p. 225, 1983.

Zuehlis, E. E. see also Fitzgerald, K. K.

INTENTIONAL BLANK PAGE

BIBLIOGRAPHY AND INDEX OF ILLINOIS GEOLOGY

SUBJECT INDEX

absolute age see also
geochronology; isotopes

absolute age--dates

- granites: The possible bearing of the granite of the UPH deep drill holes, northern Illinois, on the origin of Mississippi Valley ore deposits (Doe, Bruce R.)
- Uranium-series disequilibrium in granite from core samples of drill hole UPH-3, Stephenson County, Illinois (Rosholt, J. N.)

lake sediments: Late Holocene beach ridges and water level cycles in Lake Michigan (Collinson, Charles)

plutonic rocks: Age and geologic significance of Precambrian basement samples from northern Illinois and eastern Iowa (van Schmus, W. R.)

wood: Age and origin of the late Wisconsinan Deer Plain Terrace in the Illinois Valley (Hajic, Edwin R.)

absolute age--interpretation

- basement:** Age and significance of Precambrian basement samples from northern Illinois and adjacent states (Hoppe, W. J.)

absolute age--methods

- C-14: Accelerator radiocarbon dating of evidence for prehistoric horticulture in Illinois (Conard, Nicholas)

acoustical surveys see under geophysical surveys

aeromagnetic surveys see magnetic surveys under geophysical surveys

algae--morphology

- Mississippian: Algal compressions from the Mississippian of the Illinois Basin (Jennings, James R.)

algae--taxonomy

- Devonian: A new species of Asphaltina from the Grand Tower Limestone of southern Illinois (Devera, Joseph A.)

algal flora--biostratigraphy

- Mississippian: Calcareous microfossils from the Mississippian Keokuk Limestone and adjacent formations, Upper Mississippi River valley; their meaning for North American and intercontinental correlation (Brenckle, Paul L.)

ancient ice ages see under glacial geology

angiosperm flora see also angiosperms

angiosperms--morphology

- Cretaceous: Wood patterns in an Upper Cretaceous flora from southern Illinois (Lee, Michael R.)

applied geophysics see geophysical surveys

aquifers see under ground water

archeology see also under stratigraphy

archeology see archaeology

areal geology

- guidebook: A guide to the geology of the Capron-Rockford area (Berg, Richard C.)
- A guide to the geology of the Cave in Rock-Rosiclare area (Reinertsen, David L.)
- A guide to the geology of the Danvers-Normal area (Reinertsen, David L.)
- A guide to the geology of the Golconda area (Reinertsen, David L.)

Illinois Basin: Geologic history of the Illinois Basin (Atherton, Elwood)

maps: Geologic map of the Burden Falls Roadless Area, Pope County, Illinois (Klasner, J. S.)

Arthropoda--paleoecology

- Mississippian: The paleoecology of malacostracan arthropods in the Bear Gulch Limestone (Namurian) of central Montana (Factor, David F.)

artifacts see archaeology

under stratigraphy

atolls see reefs under sedimentary petrology; see reefs under biogenic structures under sedimentary structures; see reefs under environment under sedimentation; see reefs under sedimentary petrology under Great Lakes region

automatic data processing--engineering geology

- earthquakes: Validation of current analytical procedures for site response analysis (Chen, J. J.)

nuclear facilities: Recent results in seismic probabilistic risk analysis from the SSMRP analysis of the Zion nuclear power plant (Bohn, M. P.)

automatic data processing--geophysical surveys

remote sensing: A comparison of linear mapped from digitally processed Landsat data to faults depicted on geologic maps; the fluorspar district, western Kentucky and southern Illinois (Shelby, Lynn)

well-logging: Challenging Northeast formations examined (Maslowski, Andy)

- Litho-Density log applications in the Michigan and Illinois basins (McCall, D. C.)
- automatic data processing--hydrogeology**
- ground water: Dynamics of groundwater flow associated with a continental glacier (Filley, Thomas H.)
- Ground-water flow regime based on preliminary data for regional aquifer systems (Signor, D. C.)
- bacteria--biochemistry**
- reduction: Stable isotope evidence for the origin of sulfur in coal (Westgate, Linda M.)
- barite deposits** see also under economic geology
- base metals** see also under economic geology; see also under economic geology under Midwest
- boreholes** see under acoustical logging under well-logging; see under interpretation under well-logging
- brachiopods--biostratigraphy**
- Ordovician: Brainard Shale outliers (Upper Ordovician, Maquoketa Group) in southeastern Indiana (Fluegeman, Richard H., Jr.)
- brachiopods--paleoecology**
- Mississippian: Middle Chesterian (Golconda) marine deltaic paleocommunities from the Illinois Basin (Kelly, Stuart M.)
- brines** see also under geochemistry
- bryozoans--paleoecology**
- Mississippian: Middle Chesterian (Golconda) marine deltaic paleocommunities from the Illinois Basin (Kelly, Stuart M.)
- Cambrian** see also under stratigraphy
- Canada** see also Great Lakes; Great Lakes region; Great Plains
- carbon--geochemistry**
- black shale: Physical and chemical characterization of Devonian gas shale; quarterly status report October 1, 1980-December 31, 1980 (Zielinski, R. E.)
- shale: Enrichment of trace metals and organic carbon in shales of the New Albany Group (Frost, J. K.)
- carbon--isotopes**
- C-13/C-12: Geology of the Herrin (No. 6) coal and associated strata at Old Ben No. 24, Franklin County, Illinois (Demaris, Philip J.)
- carbonate rocks** see under sedimentary rocks
- Carboniferous** see also under stratigraphy; see also under stratigraphy under Midwest
- cartography** see under maps
- caves** see under solution features under geomorphology
- cement materials** see construction materials under economic geology
- cesium--isotopes**
- Cs-137: Sediment deposition estimation from cesium-137 measurements (Mitchell, J. Kent)
- Sediment sources of Midwestern surface waters (Wilkin, Donovan C.)
- changes of level** see also under stratigraphy; see also under stratigraphy under Great Lakes region
- clastic rocks** see under sedimentary rocks
- clastic sediments** see under sediments
- clay** see under clastic sediments under sediments
- clay mineralogy--areal studies**
- Deposition of bottom sediment in Lake Ellyn, Glen Ellyn, Illinois (Cowan, Ellen Anne)
- Depositional and diagenetic environments of carbonate-siliciclastic rocks of the Glen Dean Formation (Upper Mississippian), Illinois Basin, U.S.A. (Feiznia, Sadat)
- Evidence for stagnant ice in the Chain O'Lakes Lowland during deposition of Haeger and Wadsworth till (Hansel, Ardith K.)
- Geologic factors influencing reservoir performance at Texaco's Salem Tertiary recovery project, Marion County, Illinois (Dahl, H. M.)
- High-Zn-coals of Illinois; coal-hosted mississippi valley-type mineralization? (Whelan, Joseph F.)
- Identifying buried Indian mounds and geomorphic surfaces near Cahokia, Illinois (Barnhardt, Michael L.)
- The distribution of the Piatt Till Member of the Wedron Formation in Coles County, Illinois (Hardesty, Alan F.)
- The occurrence and distribution of mineral matter in coal lithotypes in the Herrin (No. 6) Coal seam under marine and nonmarine influences (Baumann, Dean R.)
- The origin and early genesis of clay bands in youthful sandy soils along Lake Michigan, U.S.A. (Berg, Richard C.)
- Midwest**: Clay minerals in thin loess, Ohio River basin, U.S.A. (Ruhe, Robert V.)
- climate, ancient** see paleoclimatology
- coal** see also under economic geology; geochemistry; see also under economic geology under Midwest; United States; see also under organic residues under sedimentary rocks
- coal--geochemistry**
- trace elements: Forms and volatilities of trace and minor elements in coal; I. A comparison of three pyrolysis units (Cahill, Richard A.)
- coal--production**
- recovery: Tectonic faults and their influence on coal mining in Illinois (Nelson, W. John)
- concretions** see under secondary structures under sedimentary structures
- congresses** see symposia
- Conodont--occurrence**
- Paleozoic: Natural assemblages of elements; interpretation and taxonomy (Rhodes, F. H. T.)
- conodonts--biostratigraphy**
- Carboniferous: Multielement conodont species and ecological interpretation of the lower Osagean (Lower Carboniferous) conodont zonation from Midcontinent North America (Chauff, Karl M.)
- Mississippian: Crinoid arenite banks and crinoid wacke inertia flows; a depositional model for the Burlington Limestone (Middle Mississippian), Illinois, Iowa, and

Missouri, USA (Carozzi, Albert V.)
 -- Mississippian stratotype; an overview (Thompson, Thomas L.)
Paleozoic: The Mississippian-Pennsylvanian boundary in the southern Midcontinent, United States (Manger, Walter L.)
Pennsylvanian: Revised correlations of the Shoal Creek and La Salle limestone members of the Bond Formation (Pennsylvanian) in northern Illinois (Jacobson, Russell J.)
Silurian: Silurian reef and interreef strata as responses to a cyclical succession of environments, southern Great Lakes area (Field trip 12) (Shaver, Robert H.)
construction materials see also under economic geology
cross-bedding see under planar bedding structures under sedimentary structures
crystal chemistry see also crystal growth; minerals
crystal growth see also minerals
crystal growth--carbonates
 calcite: Honeycomb calcite and other Ohio Valley delights (Pittman, Jon T.)
crystal structure see also crystal growth; minerals
crystallography see also mineralogy
dams see also under engineering geology; reservoirs
deformation--experimental studies
 microcracks: Microcrack study of granitic cores from Illinois deep borehole UPH 3 (Kowallis, Bart J.)
deformation--field studies
 stress: Geologic structures and horizontal stresses; their impact on petroleum and coal production in Illinois Basin (Lizak, John B.)
 -- State of stress, permeability, and fractures in the Precambrian granite of northern Illinois (Haimson, Bezalel C.)
deposition see under sedimentation
deposition of ores see mineral deposits, genesis
deuterium see also hydrogen; tritium
deuterium--geochemistry
 coal: High-Zn-coals of Illinois; coal-hosted mississippi valley-type mineralization? (Whelan, Joseph F.)
Devonian see also under stratigraphy
diagenesis see also sedimentation
diagenesis--dolomitization controls: The origin of mottled dolomitic limestones in the Platteville Group (Ordovician) of northern Illinois (Dathe, David B.)
petrography: Deposition and diagenesis of the Galena Group in the Upper Mississippi Valley (Delgado, David J.)
diagenesis--environment nearshore environment:
 Depositional and diagenetic environments of carbonate-siliciclastic rocks of the Glen Dean Formation (Upper Mississippian), Illinois Basin, U.S.A. (Feiznia, Sadat)
shallow-water environment:
 A petrographic study of the Backbone (Little Saline) Limestone (Lower Devonian) in southwestern Illinois and southeastern Missouri (Lange, Rolf V.)
shelf environment: The effects of depositional environment and diagenesis on the porosity and permeability in the Salem Limestone in Union and Monroe counties, southern Illinois (Jaeger, Paul)
diagenesis--indicators depth indicators: Pore geometry and permeability of the St. Peter Sandstone in the Illinois Basin (Kreutzfeld, James E.)
diagenesis--materials
 coal: Relationship between geochemistry of coal and the nature of strata overlying the Herrin Coal in the Illinois Basin (Chou, Chen-Lin)
 dolostone: Diagenetic history and fluid migration pathways of Silurian formations, Michigan Basin (Brand, Uwe)
diagenesis--processes
coalification:
 Coalification of tissues (medullosan seed fern) in a coal ball of the "Herrin (No. 6) Coal Member" of the Carbondale Formation, Illinois Basin (Hatcher, Patrick G.)
 -- Stable isotope evidence for the origin of sulfur in coal (Westgate, Linda M.)
compaction: The application of remote sensing to the detection of Niagaran pinnacle reefs in the Illinois Basin (Lovely, Daniel Arthur)
effects: A burial diagenetic model for the emplacement of zinc-lead sulfide ores in the Upper Mississippi Valley, USA (Ludvigson, Gregory A.)
differentiation see under magmas
dolomitization see under diagenesis
dolostone see also under carbonate rocks under sedimentary rocks
drainage patterns see under fluvial features under geomorphology
earthquakes see also engineering geology; seismology; see also under engineering geology under automatic data processing; Midwest; Mississippi Valley; symposia; see also under seismology under Midwest
Eastern U.S.--economic geology fuel resources: Oil and gas developments in East-Central States in 1982 (Carpenter, G. L.)
Eastern U.S.--environmental geology
pollution: Drainage quality at deep coal mine sites (Wirries, Dama L.)
Eastern U.S.--hydrogeology hydrology: Hydrology of Federal coal lands in eastern National Forest areas (Grason, David)
Eastern U.S.--paleobotany
 Plantae: Plants of Devonian-Mississippian black shales, Eastern Interior, U.S.A. (Cross, Aureal T.)
Echinodermata see also echinoderms
Echinodermata--morphology
 Mississippian: Ophiocistoid (?) ossicles from the McCraney Limestone (Lower

Mississippian) of western Illinois (Maliva, Robert G.)

echinoderms see also Echinodermata

echinoderms--biostratigraphy

Mississippian: Crinoid arenite banks and crinoid wacke inertia flows; a depositional model for the Burlington Limestone (Middle Mississippian), Illinois, Iowa, and Missouri, USA (Carozzi, Albert V.)

Pennsylvanian: Paleogeology and environments of deposition of the Brereton Limestone Member (Pennsylvanian, Desmoinesian) in southwestern Illinois (O'Connell, Dennis B.)

economic geology

barite deposits: Barite, its place and role in mississippi valley-type deposits (Zimmermann, R. A.)

base metals: Mississippi valley type base metal deposits and the Illinois Basin; a genetic relationship? (Hansen, William B.)

coal: An erosional channel in the roof of the Illinois Herrin (No.6)

coal; implications for exploration (DeMaris, Philip J.)

-- Characterization of Brazilian high-ash coals by small-angle X-ray diffraction methods (Jesus Gonzalez, H.)

-- Coal resources fact book (Indiana University, Environmental Systems Application Center)

-- Detection of potential inundation hazards by overwater seismic methods (Miller, John J.)

-- Estimation of coal resources of Illinois using Monte Carlo methods (Fang, J. H.)

-- Geologic structures and horizontal stresses; their impact on petroleum and coal production in Illinois Basin (Lizak, John B.)

-- Geology of the Herrin (No. 6) coal and associated strata at Old Ben No. 24, Franklin County, Illinois (DeMaris, Philip J.)

-- High-Zn-coals of Illinois; coal-hosted mississippi valley-type mineralization? (Whelan, Joseph F.)

-- Inorganic geochemistry of Illinois Basin coals (Chou, Chen-Lin)

-- Non-marine and marine influenced Herrin Coal and associated roof shales from southern Illinois; a mineralogical and statistical analysis (Stutzman, Paul E.)

-- Origin and economic geology of the Springfield Coal Member in the Illinois Basin (Field trip 9) (Eggert, D. L.)

-- Shallow sand channel, coal exploration, Illinois Basin (Chapman, W. L.)

-- Socio-economic resources guide book (Indiana University, Environmental Systems Application Center)

-- Stable-isotope evidence for the origin of sulfur in coal (Westgate, Linda M.)

-- Stratigraphic correlations of Seelyville, De Koven, and Davis coals (Desmoinesian) of Illinois Basin coalfield (Jacobson, Russell J.)

-- The effects of overbank deposition on the quality and maceral composition of the Herrin (No. 6) Coal of southern Illinois (Kravits, Christopher M.)

-- Thin and disturbed Herrin (No. 6) coal near the boundaries of the Illinois Basin (Danner, Stephen K.)

-- Trace and minor element analyses of the Hymera Coal Member of Indiana (Coal VI) (Heberton, Richard P.)

-- Variations in the forms and occurrences of sulfur in the Herrin No. 6 coal seam in southern Illinois (Crelling, John C.)

construction materials:

Geology of carbonate aggregate resources of Illinois (Goodwin, Jonathan H.)

-- Geology of sand and gravel aggregate resources of Illinois (Masters, John M.)

fluorspar: A comparison of linears mapped from digitally processed Landsat data to faults depicted on geologic maps; western Kentucky and southern Illinois (Shelby, Lynn)

-- A supplemental report on the Cave In Rock fluorspar district, Hardin County, Illinois (Brecke, E. A.)

-- Geologic characteristics of three major Mississippi Valley districts (Heyl, Allen V.)

-- Honeycomb calcite and other Ohio Valley delights (Pittman, Jon T.)

-- Lusk Creek Roadless Area, Illinois (Klasner, John S.)

-- New Burnside "anticline"; part of fluorspar area fault complex? (Jacobson, Russell J.)

-- Stalking the wild fluorspar (Pittman, Jon T.)

-- Temperature and salinity variations during ore deposition at the Deardorff Mine, Cave-in-Rock District, Illinois (Richardson, Catherine K.)

-- The strontium isotope and rare-earth element systematics of nonsulfide minerals from the Illinois-Kentucky fluorspar district (Dickhaut, Lisa A.)

fuel resources: Oil and gas developments in East-Central States in 1982 (Carpenter, G. L.)

gravel deposits: Geology of sand and gravel aggregate resources of Illinois (Masters, John M.)

lead ores: Honeycomb calcite and other Ohio Valley delights (Pittman, Jon T.)

lead-zinc deposits: A burial diagenetic model for the emplacement of zinc-lead sulfide ores in the Upper Mississippi Valley, USA (Ludvigson, Gregory A.)

-- Geologic characteristics of three major Mississippi Valley districts (Heyl, Allen V.)

-- Ore-depositing reactions in mississippi valley-type

- deposits (Barnes, H. L.)
- The possible bearing of the granite of the UPH deep drill holes, northern Illinois, on the origin of Mississippi Valley ore deposits (Doe, Bruce R.)
- Limestone deposits:** Geology of carbonate aggregate resources of Illinois (Goodwin, Jonathan H.)
- maps:** Mineral resource potential map of the Burden Falls Roadless Area, Pope County, Illinois (Klasner, John S.)
- Mineral resource potential map of the Lusk Creek Roadless Area, Pope County, Illinois (Klasner, John S.)
- mineral resources:** Burden Falls Roadless Area, Illinois (Klasner, John S.)
- Lusk Creek Roadless Area, Illinois (Klasner, John S.)
- Mineral resource potential map of the Burden Falls Roadless Area, Pope County, Illinois (Klasner, John S.)
- Mineral resource potential map of the Lusk Creek Roadless Area, Pope County, Illinois (Klasner, John S.)
- The mineral industry of Illinois (Hill, James J.)
- natural gas:** Physical and chemical characterization of Devonian gas shale; quarterly status report October 1, 1980-December 31, 1980 (Zielinski, R. E.)
- oil and gas fields:** Drowned barrier bar and tidal inlet sequences in Buckner-Sesser-Valier fields, Franklin County, Illinois (Young, Victor R.)
- Geologic factors influencing reservoir performance at Texaco's Salem Tertiary recovery project, Marion County, Illinois (Dahl, H. M.)
- Green pastures in Brown County (Maslowski, Andy)
- petroleum:** Challenging Northeast formations examined (Maslowski, Andy)
- Diagenetic history and fluid migration pathways of Silurian formations, Michigan Basin (Brand, Uwe)
- Fault, uplift discovered in Adams County (Bigelow, Tom)
- Focus deepens in... Illinois; Silurian reef search on the horizon (Maslowski, Andy)
- Geologic structures and horizontal stresses; their impact on petroleum and coal production in Illinois Basin (Lizak, John B.)
- Illinois; Buckhorn East most exciting play (Anonymous)
- Petroleum geology of Macoupin County, Illinois (Miller, Halsey W.)
- Small pockets yielding big production (Bigelow, Tom)
- Stratigraphic traps and deposition of Aux Vases and uppermost Ste. Genevieve formations (Mississippian), southern Illinois (Seyler, Beverly J.)
- Wildcat find strengthens interest in Renault sand (Bigelow, Tom)
- water resources:** To mine or not to mine groundwater (Sasman, Robert T.)
- Water resources activities in Illinois 1983 (Garrels, Mary L.)
- electrical logging** see under well-logging
- electromagnetic surveys** see under geophysical surveys
- engineering geology** see also deformation; environmental geology; geologic hazards; geophysical methods; ground water; mining geology; reservoirs; rock mechanics; soil mechanics; waste disposal; waterways
- engineering geology**
- dams:** Chemical grouting test programme for Mississippi River locks and dam 26 (Perez, J. Y.)
- Sensitivity of outflow peaks and flood stages to the selection of dam breach parameters and simulation models (Singh, Krishan P.)
- Stage-discharge relations at dams on the Illinois and Des Plaines Rivers in Illinois (Gray, J. R.)
- earthquakes:** Recent results in seismic probabilistic risk analysis from the SSMRP analysis of the Zion nuclear power plant (Bohn, M. P.)
- Validation of current analytical procedures for site response analysis (Chen, J. J.)
- foundations:** Design and construction of rock caissons (Gill, S. A.)
- geologic hazards:** Detection of potential inundation hazards by overwater seismic methods (Miller, John J.)
- Liquefaction potential in the central Mississippi Valley (Dbermeier, Stephen F.)
- land subsidence:** Disturbance of overburden bedrock by coal mine subsidence in Illinois (Bauer, Robert A.)
- Prediction of subsidence using complementary influence functions (Sutherland, H. J.)
- Roof fall study of the Harrisburg (No. 5) Coal in portions of Saline and Williamson counties, Illinois (Rogers, Philip R.)
- nuclear facilities:** Recent results in seismic probabilistic risk analysis from the SSMRP analysis of the Zion nuclear power plant (Bohn, M. P.)
- Validation of current analytical procedures for site response analysis (Chen, J. J.)
- petroleum engineering:** Evaluation of injection well stimulation as applied to a large micellar/polymer project (Howell, James C.)
- Infill drilling to increase reserves; actual experience in nine fields in Texas, Oklahoma, and Illinois (Barber, A. H., Jr.)
- rock mechanics:** In-situ monitoring of coal mine floor heave (Stephenson, Richard W.)
- slope stability:** Erosion model for reclamation areas (Vipulanandan, Cumaraswamy)
- Illinois landslide inventory map (Killey, M. M.)
- underground installations:** Detection of potential inundation hazards by

engineering geology/environmental geology

overwater seismic methods
(Miller, John J.)

waste disposal: Analysis of rock stress around a liquid waste injection system in Illinois (Heidari, Manoutchehr)

-- Analysis of soil cores beneath radioactive-waste-disposal site, Sheffield, Illinois (Healy, R. W.)

-- Hydrogeologic controls on the extent and rate of tritium migration from a low-level radioactive waste disposal facility near Sheffield, Illinois (Foster, J. B.)

-- Hydrologic investigations of failure mechanisms and migration of organic chemicals at Wilsonville, Illinois (Johnson, Thomas M.)

-- Low-level nuclear waste shallow land burial trench isolation; annual report; October 1982 - September 1983 (McCray, J. G.)

-- Low-level radioactive-waste burial at the Palos Forest Preserve, Illinois; geology and hydrology of the glacial drift, as related to the migration of tritium (Dlimpio, J. C.)

-- Moisture characteristics of compacted soils for use in trench covers (Klein, S.)

waterways: Lithium silicate sedimentation tracer for shoal deposit studies (Nedved, T. K.)

engineering geology--petroleum engineering

hydraulic fracturing: Frac sand remains important geological find (Maslowski, Andy)

reservoir rocks: Evaluation of injection well stimulation as applied to a large micellar/polymer project (Howell, James C.)

-- Infill drilling to increase reserves; actual experience in nine fields in Texas, Oklahoma, and Illinois (Barber, A. H., Jr.)

environmental geology see also engineering geology; geologic hazards; waste disposal

environmental geology

geologic hazards: Illinois landslide inventory map (Killey, M. M.)

-- Reconstruction of precipitation history in North American corn belt using tree rings (Blasing, T. J.)

land use: Information source book (Indiana University, Environmental Systems Application Center)

-- Natural resources guide book (Indiana University, Environmental Systems Application Center)

-- Sediment sources of Midwestern surface waters (Wilkin, Donovan C.)

-- Stratigraphy and land-use applications; a case study in surficial geologic mapping of Madison County, Illinois (Killey, Myrna M.)

-- Surficial geology of Kendall County, Illinois (Brossman, James J.)

maps: Illinois landslide inventory map (Killey, M. M.)

-- Illinois mined-out coal areas; map and data system (Danner, Stephen K.)

pollution: Chemistry of bottom sediments from the Cal-Sag Channel and the Des Plaines and Illinois rivers between Joliet and Havana, Illinois (Harrison, W.)

-- Deposition of bottom sediment in Lake Ellyn, Glen Ellyn, Illinois (Cowan, Ellen Anne)

-- Drainage quality at deep coal mine sites (Wirries, Dama L.)

-- Evaluation of soil tests as a measure of phosphorus and potassium availability in Illinois coal waste (Lewis, B. G.)

-- Hydrologic investigations of failure mechanisms and migration of organic chemicals at Wilsonville, Illinois (Johnson, Thomas M.)

-- Illinois ground water pollution (Walker, William H.)

-- Lithium silicate sedimentation tracer for shoal deposit studies (Nedved, T. K.)

-- Regional characteristics of the total dissolved

minerals in stream waters of Illinois (Flemal, Ronald C.)

-- Selected metals in river sediment, water, and animals (Mathis, B. J.)

-- Techniques for studying nonpoint water quality (Wilkin, Donovan C.)

-- The effects of anaerobically digested municipal sanitary sewage sludge on the oxidation of pyrite (Loomis, Edward Charles)

-- Vertical and horizontal stability of streams in northern Illinois (Vagt, Peter J.)

reclamation: Erosion model for reclamation areas (Vipulanandan, Cumaraswamy)

-- Illinois mined-out coal areas; map and data system (Danner, Stephen K.)

-- Mine-reclamation hydrology in Fulton County, Illinois (Peters, C. A.)

-- Quality of runoff water from soil-covered reclamation sites (Vipulanandan, Cumaraswamy)

-- Runoff water quality and hydrology at coal refuse disposal sites in southern Illinois (Prodan, P. F.)

-- Variations in hydrologic soil properties caused by mining activities (Chong, She-Kong)

waste disposal: A system for measuring surface runoff and collecting sediment samples from small areas (Gray, John R.)

-- Ground-water flow to strip-mined lake from low-level radioactive-waste-disposal site near Sheffield, Illinois (Foster, J. B.)

-- Radionuclide movement at a radioactive-waste burial site in Illinois (Dlimpio, J. C.)

environmental geology--methods tracers: Lithium silicate sedimentation tracer for shoal deposit studies (Nedved, T. K.)

environmental

geology--techniques

monitoring: Techniques for studying nonpoint water quality (Wilkin, Donovan C.)

erosion see under processes
 under geomorphology

eruptive rocks see igneous rocks

experimental studies see under deformation

faulting see faults

faults--displacements

- dip-slip faults:* Structural geology of Shawneetown fault zone, southeastern Illinois (Lumm, Donald K.)
- overthrust faults:* Internal stratigraphy of Devonian Tioga Ash beds in Appalachian Valley and Ridge Province (Dennison, John M.)
- strike-slip faults:* Strike-slip fault in flat-lying strata of Macoupin County, Illinois (Nelson, W. John)

faults--distribution

- Great Lakes region:* A seismic reflection study of the Precambrian basement along the Illinois-Wisconsin state line (Fasnacht, Timothy Lee)
- imagery:* A comparison of linears mapped from digitally processed Landsat data to faults depicted on geologic maps; the fluorspar district, western Kentucky and southern Illinois (Shelby, Lynn)
- lineaments:* Structural relationships between Cottage Grove and Shawneetown fault systems, southeastern Illinois, as inferred from gravity data (Strunk, Kevin L.)
- reactivation:* History of displacement along Ste. Genevieve fault zone, southwestern Illinois (Schwalb, Howard R.)
- Tectonic history of southeastern Illinois (Nelson, W. John)

faults--effects

- geologic hazards:* Tectonic faults and their influence on coal mining in Illinois (Nelson, W. John)

faults--interpretation

- seismic surveys:* Common-depth-point seismic-reflection survey on the Mississippi River in the vicinity of Alton, Illinois (Tirey, G. B.)

faults--systems

- block structures:* New Burnside "anticline"; part of fluorspar-area fault complex? (Jacobson, Russell J.)
- grabens:* Structural history of southern Illinois and upper Mississippi Embayment (Schwalb, Howard R.)
- ferns* see also pteridophytes
- ferns--biostratigraphy*
- Mississippian:* Distribution of fossil plant taxa in the Upper Mississippian and Lower Pennsylvanian Illinois Basin (Jennings, James R.)
- fission-track dating* see under geochronology
- floods* see under geologic hazards
- fluid inclusions--geologic thermometry*
- brines:* The strontium isotope and rare-earth element systematics of nonsulfide minerals from the Illinois-Kentucky fluorspar district (Dickhaut, Lisa A.)
- fluid*
- inclusions--interpretation*
- fluorite:* Temperature and salinity variations during ore deposition at the Deardorff Mine, Cave-in-Rock District, Illinois (Richardson, Catherine K.)
- quartz:* Temperature and salinity variations during ore deposition at the Deardorff Mine, Cave-in-Rock District, Illinois (Richardson, Catherine K.)
- fluid*
- inclusions--paleosalinity*
- ore-forming fluids:* High-Zn-coals of Illinois; coal-hosted mississippi valley-type mineralization? (Whelan, Joseph F.)
- fluvial features* see under geomorphology
- folds* see also faults
- foraminifera* see also foraminifers
- foraminifers--biostratigraphy*

 - Cretaceous:* Late Cretaceous marine foraminifers from Pleistocene fluviolacustrine deposits in eastern Missouri (Thompson, Thomas L.)
 - Mississippian:* Calcareous microfossils from the

Mississippian Keokuk Limestone and adjacent formations, Upper Mississippi River valley; their meaning for North American and intercontinental correlation (Brenckle, Paul L.)

Paleocene: The stratigraphic position of Paleocene foraminifera from Kentucky and Illinois (Fluegeman, Richard H., Jr.)

Paleozoic: The Mississippian-Pennsylvanian boundary in the southern Midcontinent, United States (Manger, Walter L.)

Pennsylvanian: Paleoecology and environments of deposition of the Brereton Limestone Member (Pennsylvanian, Desmoinesian) in southwestern Illinois (O'Connell, Dennis B.)

-- Revised correlations of the Shoal Creek and La Salle limestone members of the Bond Formation (Pennsylvanian) in northern Illinois (Jacobson, Russell J.)

fossil man--biochemistry

 - trace elements:* An evaluation of postdepositional changes in the trace element content of human bone (Nelson, Dorothy A.)

fossils, problematic see problematic fossils

foundations see also under engineering geology; rock mechanics; soil mechanics; see also under engineering geology under United States

fractures--distribution

 - granites:* Microcrack study of granitic cores from Illinois deep borehole UPH 3 (Kowallis, Bart J.)
 - State of stress, permeability, and fractures in the Precambrian granite of northern Illinois (Haimson, Bezalel C.)

fractures--style

 - joints:* A seismic reflection study of the Precambrian basement along the Illinois-Wisconsin state line (Fasnacht, Timothy Lee)

fuel resources see also under economic geology; see also under economic geology under Eastern U.S.

gas inclusions see fluid inclusions

genesis of ore deposits see mineral deposits, genesis

geochemistry

brines: Sampling of brine in cores of Precambrian granite from northern Illinois (Couture, Rex A.)

coal: Chemical analyses of a vertical sample of Herrin (No. 6) Coal Member (Niklas, Karl J.)

isotopes: Isotopic composition of uranium and thorium in crystalline rocks (Rosholt, J. N.)

-- Isotopic composition of uranium and thorium in crystalline rocks (Rosholt, John N.)

-- Oxygen isotope study of Precambrian granites from the Illinois Deep Hole Project (Shieh, Yuch-Ning)

-- Oxygen isotopic compositions of minerals from Illinois Deep Drill Hole granites (Kombrink, Mark)

-- Sulfur isotopic fractionation in the formation of pyrite from Upper Devonian black shales (Anderson, Thomas F.)

-- The possible bearing of the granite of the UPH deep drill holes, northern Illinois, on the origin of Mississippi Valley ore deposits (Doe, Bruce R.)

organic carbon: Enrichment of trace metals and organic carbon in shales of the New Albany Group (Frost, J. K.)

organic materials: Environmental fates of polychlorinated dioxins and furans as determined from sediment cores (Czuczwa, Jean M.)

-- Organic matter alterations during sinking of sediment particles in Lake Michigan (Meyers, Philip A.)

rare earths: Trace element geochemistry of Precambrian granite from northern Illinois Deep Drill Hole UPH-3 (Schulz, Klaus J.)

sulfur: Stable isotope evidence for the origin of

sulfur in coal (Westgate, Linda M.)

trace elements:

Geochemistry-of trace elements and sulfur in the Springfield (No. 5) Coal in the Illinois Basin (Chou, C. L.)

-- Inorganic geochemistry of Illinois Basin coals (Chou, Chen-Lin)

-- Mineral matter and trace elements in the Herrin (No. 6) Coal in the Illinois Basin (Fiene, F. L.)

-- Trace and minor element analyses of the Hymera Coal Member of Indiana (Coal VI) (Heberton, Richard P.)

geochemistry--processes

oxidation: Chemical analyses of a vertical sample of Herrin (No. 6) Coal Member (Niklas, Karl J.)

-- The effects of anaerobically digested municipal sanitary sewage sludge on the oxidation of pyrite (Loomis, Edward Charles)

pyrolysis: Forms and volatilities of trace and minor elements in coal; I. A comparison of three pyrolysis units (Cahill, Richard A.)

reduction: Stable isotope evidence for the origin of sulfur in coal (Westgate, Linda M.)

-- Sulfur isotopic fractionation in the formation of pyrite from Upper Devonian black shales (Anderson, Thomas F.)

geochronology see also absolute age

geochronology

absolute age:

Uranium-series disequilibrium in granite from core samples of drill hole UPH-3, Stephenson County, Illinois (Rosholt, J. N.)

Holocene: Accelerator radiocarbon dating of evidence for prehistoric horticulture in Illinois (Conard, Nicholas)

-- Late Holocene beach ridges and water level cycles in Lake Michigan (Collinson, Charles)

Paleozoic: Where have all the sediments gone?

fission track dating of the Illinois Deep Hole core (Zimmermann, Robert A.)

Pleistocene: Age and origin of the late Wisconsinan Deer Plain Terrace in the Illinois Valley (Hajic, Edwin R.)

Precambrian: Age and geologic significance of Precambrian basement samples from northern Illinois and eastern Iowa (van Schmus, W. R.)

-- U-Th-Pb isotope systematics and uranium distribution within granite recovered from drill-hole UPH-3, northern Illinois (Stuckless, J. S.)

-- Where have all the sediments gone? fission track dating of the Illinois Deep Hole core (Zimmermann, Robert A.)

Proterozoic: Age and significance of Precambrian basement samples from northern Illinois and adjacent states (Hoppe, W. J.)

geochronology--fission-track dating

basement: Where have all the sediments gone? fission track dating of the Illinois Deep Hole core (Zimmermann, Robert A.)

geochronology--tree rings

applications:

Reconstruction of precipitation history in North American corn belt using tree rings (Blasing, T. J.)

geologic hazards see also under engineering geology; environmental geology; see also under engineering geology under Mississippi Valley; see also under environmental geology under Midwest

geologic hazards--floods

dams: Sensitivity of outflow peaks and flood stages to the selection of dam breach parameters and simulation models (Singh, Krishan P.)

geologic thermometry see under fluid inclusions

geologic time see absolute age; geochronology

geomorphology see also glacial geology

geomorphology

fluvial features: Hydraulic geometry of floodplains (Bhawmik, Nani G.)
 -- Times of concentration and storage coefficients for Illinois streams (Graf, Julia B.)
lacustrine features:
 Shoreline processes and geomorphology, southwestern Lake Michigan (Field trip 6) (Collinson, Charles)
geomorphology--fluvial features
drainage basins: Times of concentration and storage coefficients for Illinois streams (Graf, Julia B.)
drainage patterns: The application of remote sensing to the detection of Niagaran pinnacle reefs in the Illinois Basin (Lovely, Daniel Arthur)
-- Vertical and horizontal stability of streams in northern Illinois (Vagt, Peter J.)
floodplains: Hydraulic geometry of floodplains (Bhawmik, Nani G.)
terraces: The late Wisconsinan Savanna Terrace in tributaries to the upper Mississippi River (Flock, Mark A.)
geomorphology--lacustrine features
landform evolution:
 Shoreline processes and geomorphology, southwestern Lake Michigan (Field trip 6) (Collinson, Charles)
terraces: Age and origin of the late Wisconsinan Deer Plain Terrace in the Illinois Valley (Hajic, Edwin R.)
geomorphology--processes
erosion: Sediment sources of Midwestern surface waters (Wilkin, Donovan C.)
geomorphology--solution features
caves: Mastodon bones in an Illinois cave (Frasz, Geoffrey B.)
geophysical methods see also **geophysical surveys**
geophysical methods--seismic methods
applications: Detection of potential inundation hazards by overwater seismic methods (Miller, John J.)

geophysical surveys see under automatic data processing; Mississippi Valley; see acoustical surveys under geophysical surveys; see electromagnetic surveys under geophysical surveys; see gravity surveys under geophysical surveys; see magnetic surveys under geophysical surveys; see seismic surveys under geophysical surveys under Mississippi Valley; see also geophysical methods
geophysical surveys
acoustical surveys: Lithium silicate sedimentation tracer for shoal deposit studies (Nedved, T. K.)
electromagnetic surveys:
 Application of multivariate regression techniques to the study of anomalies of geomagnetic variations in Plano, Illinois and Cascade, Iowa (Grimmelmann, E. K.)
gravity surveys: Geological significance of surface gravity measurements in the vicinity of the Illinois deep drill holes (Aiken, O. W.)
-- Structural relationships between Cottage Grove and Shawneetown fault systems, southeastern Illinois, as inferred from gravity data (Strunk, Kevin L.)
magnetic surveys: Age and geologic significance of Precambrian basement samples from northern Illinois and eastern Iowa (van Schmus, W. R.)
remote sensing: A comparison of linear features mapped from digitally processed Landsat data to faults depicted on geologic maps; the fluorspar district, western Kentucky and southern Illinois (Shelby, Lynn)
-- The application of remote sensing to the detection of Niagaran pinnacle reefs in the Illinois Basin (Lovely, Daniel Arthur)
seismic surveys: A seismic reflection study of the Precambrian basement along the Illinois-Wisconsin state line (Fasnacht, Timothy Lee)

-- Common-depth-point seismic-reflection survey on the Mississippi River in the vicinity of Alton, Illinois (Tirey, G. B.)
-- Detection of potential inundation hazards by overwater seismic methods (Miller, John J.)
-- Seismic velocities of lower Paleozoic stratigraphic units in Stephenson County, Illinois (Wang, H. F.)
-- Shallow sand channel, coal exploration, Illinois Basin (Chapman, W. L.)
-- Shallow seismic refraction survey, Gallatin County, Illinois (Roman, Juan A. Deliz)
-- U.S. Geological Survey common-depth-point seismic-reflection survey between Mississippi River miles 195 and 210 (R/V Neecho, cruise NE-80-3) (Winget, E. A.)
well-logging: Illinois Deep Hole Project (Anonymous)
-- Interpretation of core and well log physical property data from drill hole UPH-3, Stephenson County, Illinois (Daniels, Jeffrey J.)
-- Introduction to the Illinois Deep Hole Project (Coates, M. S.)
-- Litho-Density log applications in the Michigan and Illinois basins (McCall, D. C.)
geophysics see also deformation; engineering geology
geotechnics see engineering geology
germanium--geochemistry
coal: Trace and minor element analyses of the Hymera Coal Member of Indiana (Coal VI) (Heberton, Richard P.)
glacial geology see also geomorphology
glacial geology--ancient ice ages
Ordovician: Maquoketa Shale Group of northern Illinois (Kolata, Dennis R.)
glacial geology--glacial features
til: A plant macrofossil assemblage from Illinoian glacial till in Jackson County, Illinois (Jackson, Stephen T.)
-- Importance of the regelation process to

certain properties of basal tills deposited by the Laurentide ice sheet in Iowa and Illinois, U.S.A. (Kemmis, T. J.)

-- The Pleistocene stratigraphy and geomorphology of central-southern Wisconsin and part of northern Illinois (Fricke, Carl A. P.)

-- The Tiskilwa Till, a regional view of its origin and depositional processes (Wickham, Susan Specht)

-- The Wadsworth Till Member of Illinois and the equivalent Oak Creek Formation of Wisconsin (Hansel, Ardith K.)

glacial geology--glaciation

deglaciation: Late Cretaceous marine foraminifers from Pleistocene fluviolacustrine deposits in eastern Missouri (Thompson, Thomas L.)

deposition: Lithofacies in the Batestown Till Member, Wedron Formation at two sites in eastern Illinois (von Rhee, Robert W.)

-- Sedimentological interpretation of the Belgium Member, Banner Formation, eastern Illinois (Johnson, W. Hilton)

-- Stratigraphic reassignment of the Hagarstown Member in Illinois (Killey, Myrna M.)

glacial extent: Stratigraphy of the Wedron and Trafalgar formations (Wisconsinan) in east-central Illinois and west-central Indiana (Field trip 3) (Kempton, John P.)

ice movement: Evidence for stagnant ice in the Chain O'Lakes Lowland during deposition of Haeger and Wadsworth till (Hansel, Ardith K.)

-- The distribution of the Piatt Till Member of the Wedron Formation in Coles County, Illinois (Hardesty, Alan F.)

til: Runoff water quality and hydrology at coal refuse disposal sites in southern Illinois (Prodan, P. F.)

glacial geology--glaciers

meltwater: Dynamics of groundwater flow associated with a continental glacier (Filley, Thomas H.)

glaciation see under glacial geology

glaciers see under glacial geology

grabens see under systems under faults

granites see under igneous rocks

gravel deposits see also under economic geology

gravity surveys see under geophysical surveys

Great Lakes--geochemistry

organic materials:

- Environmental fates of polychlorinated dioxins and furans as determined from sediment cores (Czuczwa, Jean M.)
- Organic matter alterations during sinking of sediment particles in Lake Michigan (Meyers, Philip A.)

Great Lakes--geochronology

Holocene: Late Holocene beach ridges and water level cycles in Lake Michigan (Collinson, Charles)

Great Lakes

region--engineering geology

shorelines: Shoreline processes and geomorphology, southwestern Lake Michigan (Field trip 6) (Collinson, Charles)

Great Lakes

region--sedimentary petrology

diagenesis: Deposition and diagenesis of the Galena Group in the Upper Mississippi Valley (Delgado, David J.)

reefs: Silurian reef and interreef strata as responses to a cyclical succession of environments, southern Great Lakes area (Field trip 12) (Shaver, Robert H.)

Great Lakes region--soils

pedogenesis: The origin and early genesis of clay bands in youthful sandy soils along Lake Michigan, U.S.A. (Berg, Richard C.)

Great Lakes

region--stratigraphy

changes of level: Late Holocene beach ridges and

water level cycles in Lake Michigan (Collinson, Charles)

maps: Quaternary geologic map of the Chicago 4 degrees by 6 degrees Quadrangle, United States (Lineback, J. A.)

Ordovician: Correlation of K-bentonites in the Decorah Subgroup of the Mississippi Valley by chemical fingerprinting (Kolata, Dennis R.)

Quaternary: Quaternary geologic map of the Chicago 4 degrees by 6 degrees Quadrangle, United States (Lineback, J. A.)

Great Plains--tectonophysics

plate tectonics: The Baraboo Interval; a tale of red quartzites (Dott, R. H., Jr.)

ground water see also hydrogeology; hydrology

ground water--aquifers

compressed air: Confined aquifers as reservoirs for compressed air (Allen, Robert D.)

ground water--geochemistry

filtration: Biologically mediated chemical changes in the filtration of aerated ground waters (Baliga, K. Y.)

ground water--surveys

Aquifer studies at a proposed coal strip mine near Industry, Illinois (Galloway, D. L.)

-- Changes in ground water quality associated with cast overburden material in Southwest Perry County, Illinois (Oertel, Allen O.)

-- Dynamics of a fertilizer contaminant plume in groundwater (Barcelona, Michael J.)

-- Dynamics of groundwater flow associated with a continental glacier (Filley, Thomas H.)

-- Ground-water flow to strip-mined lake from low-level radioactive-waste-disposal site near Sheffield, Illinois (Foster, J. B.)

-- Hydrogeologic controls on the extent and rate of tritium migration from a low-level radioactive waste disposal facility near Sheffield, Illinois (Foster, J. B.)

- Hydrogeology of glacial terranes in the Great Lakes region (Cartwright, Keros)
- Hydrogeology of the Mahomet bedrock valley deposits (Cartwright, K.)
- Hydrologic investigations of failure mechanisms and migration of organic chemicals at Wilsonville, Illinois (Johnson, Thomas M.)
- Illinois ground water pollution (Walker, William H.)
- Low-level radioactive-waste burial at the Palos Forest Preserve, Illinois; geology and hydrology of the glacial drift, as related to the migration of tritium (Olimpio, J. C.)
- Moisture characteristics of compacted soils for use in trench covers (Klein, S.)
- Radionuclide movement at a radioactive-waste burial site in Illinois (Olimpio, J. C.)
- Sampling of brine in cores of Precambrian granite from northern Illinois (Couture, Rex A.)
- Spatial variability of hydrologic data; the cost of ignoring it (Bakr, Adel A.)
- To mine or not to mine groundwater (Sasman, Robert T.)
- Variations in hydrologic soil properties caused by mining activities (Chong, She-Kong)
- Great Lakes region:** A seismic reflection study of the Precambrian basement along the Illinois-Wisconsin state line (Fasnacht, Timothy Lee)
- Midwest:** Ground-water flow regime based on preliminary data for regional aquifer systems (Signor, D. C.)
- United States:** Drainage quality at deep coal mine sites (Wirries, Dama L.)
- guidebook** see under areal geology
- gymnosperm flora** see also gymnosperms

- gymnosperms--Coniferales**
- Pleistocene: A plant macrofossil assemblage from Illinoian glacial till in Jackson County, Illinois (Jackson, Stephen T.)
- gymnosperms--floral studies**
- Pennsylvanian: The taxonomy of *Conostoma leptospermum* and *C. platyspermum* (Rothwell, Gar W.)
- gymnosperms--fossilization**
- Paleozoic: Coalification of tissues (medullasan seed fern) in a coal ball of the "Herrin (No. 6) Coal Member" of the Carbondale Formation, Illinois Basin (Hatcher, Patrick G.)
- gymnosperms--morphology**
- Pennsylvanian: The synangiate nature of *Dolerotheca* (Stidd, Benton M.)
- *Trigonocarpus leeanus*, a new species from the Middle Pennsylvanian of southern Illinois (Gastaldo, Robert A.)
- gymnosperms--phylogeny**
- Pennsylvanian: Structure affinity, and phylogeny of *Dolerotheca formosa* (Dufek, Debra A.)
- Holocene** see also under geochronology; see also under geochronology under Great Lakes; North America
- hydrogen** see also deuterium; tritium
- hydrogen--geochemistry**
- black shale: Physical and chemical characterization of Devonian gas shale; quarterly status report October 1, 1980-December 31, 1980 (Zielinski, R. E.)
- hydrogen--isotopes**
- D/H: High-Zn-coals of Illinois; coal-hosted mississippi valley-type mineralization? (Whelan, Joseph F.)
- The strontium isotope and rare-earth element systematics of nonsulfide minerals from the Illinois-Kentucky fluorspar district (Dickhaut, Lisa A.)
- tritium:** Hydrogeologic controls on the extent and rate of tritium migration from a low-level radioactive waste disposal facility near Sheffield, Illinois (Foster, J. B.)

- Radionuclide movement at a radioactive-waste burial site in Illinois (Olimpio, J. C.)
- hydrogeology** see also ground water; hydrology
- hydrogeology**
- ground water: Aquifer studies at a proposed coal strip mine near Industry, Illinois (Galloway, O. L.)
- Changes in ground water quality associated with cast overburden material in Southwest Perry County, Illinois (Oertel, Allen O.)
- Confined aquifers as reservoirs for compressed air (Allen, Robert D.)
- Dynamics of a fertilizer contaminant plume in groundwater (Barcelona, Michael J.)
- Dynamics of groundwater flow associated with a continental glacier (Filley, Thomas H.)
- Hydrogeology of glacial terranes in the Great Lakes region (Cartwright, Keros)
- Hydrogeology of the Mahomet bedrock valley deposits (Cartwright, K.)
- Spatial variability of hydrologic data; the cost of ignoring it (Bakr, Adel A.)
- hydrology:** Estimates of long-term suspended-sediment loads in Bay Creek at Nebo, Pike County, Illinois, 1940-1980 (Lazaro, Timothy R.)
- Hydrology and water quality in coal areas of Illinois (Zuehls, E. E.)
- Hydrology of area 25, Eastern Region, Interior Coal Province, Illinois (Zuehls, E. E.)
- Hydrology of area 29, Eastern Region, Interior Coal Province, Illinois (Fitzgerald, K. K.)
- Hydrology of area 30, eastern region, Interior Coal Province, Indiana and Illinois (Wangsness, D. J.)
- Measurement of bedload discharge in nine Illinois streams with the Helley-Smith sampler (Graf, J. B.)
- Mine-reclamation hydrology in Fulton County, Illinois (Peters,

- C. A.)
- Post-mining neutralization of acidic surface mine lakes (Brugam, Richard B.)
- Reach velocities in Illinois streams (Graf, Julia B.)
- Runoff, sediment transport, and water quality in a northern Illinois agricultural watershed before urban development 1979-81 (Allen, Howard E., Jr.)
- Sediment deposition estimation from cesium-137 measurements (Mitchell, J. Kent)
- Traveltime and longitudinal dispersion in Illinois streams (Graf, Julia B.)
- Vertical and horizontal stability of streams in northern Illinois (Vagt, Peter J.)
- Work plan for the Sangamon River basin, Illinois (Stamer, J. K.)
- hydrogeology--methods**
 - sampling: Sampling of brine in cores of Precambrian granite from northern Illinois (Couture, Rex A.)
- hydrology** see also ground water; hydrogeology
- hydrology--surveys**
 - Estimates of long-term suspended-sediment loads in Bay Creek at Nebo, Pike County, Illinois, 1940-1980 (Lazaro, Timothy R.)
 - Hydrology and water quality in coal areas of Illinois (Zuehls, E. E.)
 - Hydrology of area 25, Eastern Region, Interior Coal Province, Illinois (Zuehls, E. E.)
 - Hydrology of area 29, Eastern Region, Interior Coal Province, Illinois (Fitzgerald, K. K.)
 - Hydrology of area 30, eastern region, Interior Coal Province, Indiana and Illinois (Wangsness, D. J.)
 - Long-term sediment yields from Bay Creek, Pike County, Illinois (Lazaro, T. R.)
 - Measurement of bedload discharge in nine Illinois streams with the Helley-Smith sampler (Graf, J. B.)
- Mine-reclamation hydrology in Fulton County, Illinois (Peters, C. A.)
- Post-mining neutralization of acidic surface mine lakes (Brugam, Richard B.)
- Quality of runoff water from soil-covered reclamation sites (Vipulanandan, Cumaraswamy)
- Reach velocities in Illinois streams (Graf, Julia B.)
- Regional characteristics of the total dissolved minerals in stream waters of Illinois (Flemal, Ronald C.)
- Runoff and sediment transport from an agricultural watershed in northern Illinois (Allen, H. E., Jr.)
- Runoff, sediment transport, and water quality in a northern Illinois agricultural watershed before urban development 1979-81 (Allen, Howard E., Jr.)
- Runoff water quality and hydrology at coal refuse disposal sites in southern Illinois (Prodan, P. F.)
- Sediment deposition estimation from cesium-137 measurements (Mitchell, J. Kent)
- Sediment sources of Midwestern surface waters (Wilkin, Donovan C.)
- Techniques for studying nonpoint water quality (Wilkin, Donovan C.)
- Times of concentration and storage coefficients for Illinois streams (Graf, Julia B.)
- Traveltime and longitudinal dispersion in Illinois streams (Graf, Julia B.)
- Vertical and horizontal stability of streams in northern Illinois (Vagt, Peter J.)
- Eastern U.S.: Hydrology of Federal coal lands in eastern National Forest areas (Grason, David)**
- Great Lakes region:**
 - Deposition of bottom sediment in Lake Ellyn, Glen Ellyn, Illinois (Cowan, Ellen Anne)
- Illinois River:**
 - Stage-discharge relations
- at dams on the Illinois and Des Plaines Rivers in Illinois (Gray, J. R.)
- Lake Michigan:** Late Holocene beach ridges and water level cycles in Lake Michigan (Collinson, Charles)
- Organic matter alterations during sinking of sediment particles in Lake Michigan (Meyers, Philip A.)
- Shoreline processes and geomorphology, southwestern Lake Michigan (Field trip 6) (Collinson, Charles)
- Midwest:** Reconstruction of precipitation history in North American corn belt using tree rings (Blasing, T. J.)
- Sangamon River basin:** Work plan for the Sangamon River basin, Illinois (Stamer, J. K.)
- United States:** Hydraulic geometry of floodplains (Bhawmik, Nani G.)
- hydrology--techniques**
 - sampling: A system for measuring surface runoff and collecting sediment samples from small areas (Gray, John R.)
- hydrothermal alteration** see under processes under metasomatism
- ice ages** see glacial geology
- igneous rocks** see also fluid inclusions; intrusions; magmas; metamorphic rocks; metasomatism
- igneous rocks--granites**
 - distribution:** Geological significance of surface gravity measurements in the vicinity of the Illinois deep drill holes (Aiken, O. W.)
 - geochemistry:** Oxygen isotopic and mineralogic studies of Precambrian granites from the Illinois Deep Hole Project (Shieh, Yuch-ning)
 - Oxygen isotopic compositions of minerals from Illinois Deep Drill Hole granites (Kombrink, Mark)
 - The possible bearing of the granite of the UPH deep drill holes, northern Illinois, on the origin of Mississippi Valley ore deposits (Doe, Bruce R.)
 - U-Th-Pb isotope systematics and uranium

distribution within granite recovered from drill-hole UPH-3, northern Illinois (Stuckless, J. S.)

-- Uranium-series disequilibrium in granite from core samples of drill hole UPH-3, Stephenson County, Illinois (Rosholt, J. N.)

petrology: Petrology and physical properties of granites from the Illinois deep hole in Stephenson County (Lidiak, Edward G.)

physical properties: Interpretation of core and well log physical properties data from drill hole UPH-3, Stephenson County, Illinois (Daniels, Jeffrey J.)

-- Interpretation of core and well log physical property data from drill hole UPH-3, Stephenson County, Illinois (Daniels, Jeffrey J.)

-- Petrographic and physical factors controlling thermal conductivity of granitic rocks in Illinois deep holes UPH 1, 2, and 3 (Eckstein, Y.)

trace elements: Trace element geochemistry of Precambrian granite from northern Illinois Deep Drill Hole UPH-3 (Schulz, Klaus J.)

incertae sedis see problematic fossils

inclusions see also fluid inclusions

Insecta--occurrence

Pennsylvanian: The Mazon Creek nodules (Konecny, Jim)

Insecta--Palaeodictyopteroidea

Carboniferous: New Homoipteridae (Insecta: Paleodictyoptera) with wing articulation from Upper Carboniferous strata of Mazon Creek, Illinois (Kukalova-Peck, Jarmila)

instruments see under electromagnetic logging

under well-logging

intrusions see also igneous rocks; metamorphism; metasomatism

intrusions--geochemistry

isotopes: Oxygen isotopic and mineralogic studies of Precambrian granites from the Illinois Deep Hole Project (Shieh, Yuch-ning)

intrusions--plutons

absolute age: Age and geologic significance of Precambrian basement samples from northern Illinois and eastern Iowa (van Schmus, W. R.)

geometry: Geological significance of surface gravity measurements in the vicinity of the Illinois deep drill holes (Aiken, D. W.)

Invertebrata see also Arthropoda; Echinodermata; Insecta; problematic fossils

Invertebrata--miscellanea

collecting: Fossils (King, James E.)

invertebrates see also brachiopods; bryozoans; conodonts; echinoderms; foraminifers; mollusks; ostracods; radiolarians; trilobites

invertebrates--biostratigraphy

Pennsylvanian: Detailed biostratigraphic correlation, Shumway "Cyclothem", Virgilian, Illinois Basin (Langenheim, Ralph L., Jr.)

invertebrates--paleoecology

Mississippian: Paleontology and stratigraphy of strata associated with the basal Chesterian in its type region (Jennings, James R.)

isotope dating see absolute age

isotopes see also absolute age; geochronology

isotopes--carbon

C-13/C-12: Geology of the Herrin (No. 6) coal and associated strata at Old Ben No. 24, Franklin County, Illinois (Demaris, Philip J.)

isotopes--cesium

Cs-137: Sediment deposition estimation from cesium-137 measurements (Mitchell, J. Kent)

-- Sediment sources of Midwestern surface waters (Wilkin, Donovan C.)

isotopes--fluid inclusions

stable isotopes: High-Zn-coals of Illinois; coal-hosted mississippi valley-type mineralization? (Whelan, Joseph F.)

isotopes--hydrogen

tritium: Radionuclide movement at a radioactive-waste burial

site in Illinois (Olimpio, J. C.)

isotopes--igneous rocks

granites: Isotopic composition of uranium and thorium in crystalline rocks (Rosholt, John N.)

-- The possible bearing of the granite of the UPH deep drill holes, northern Illinois, on the origin of Mississippi Valley ore deposits (Doe, Bruce R.)

isotopes--oxygen

O-18/O-16: Oxygen isotope study of Precambrian granites from the Illinois Deep Hole Project (Shieh, Yuch-Ning)

-- Oxygen isotopic and mineralogic studies of Precambrian granites from the Illinois Deep Hole Project (Shieh, Yuch-ning)

-- Oxygen isotopic compositions of minerals from Illinois Deep Drill Hole granites (Kombrink, Mark)

isotopes--strontium

Sr-87/Sr-86: The strontium isotope and rare-earth element systematics of nonsulfide minerals from the Illinois-Kentucky fluorspar district (Dickhaut, Lisa A.)

isotopes--sulfur

S-34/S-32: A burial diagenetic model for the emplacement of zinc-lead sulfide ores in the Upper Mississippi Valley, USA (Ludvigson, Gregory A.)

-- Stable isotope evidence for the origin of sulfur in coal (Westgate, Linda M.)

-- Sulfur isotopic fractionation in the formation of pyrite from Upper Devonian black shales (Anderson, Thomas F.)

isotopes--uranium

trans-uranium elements: Uranium-series disequilibrium in granite from core samples of drill hole UPH-3, Stephenson County, Illinois (Rosholt, J. N.)

U-238/U-234: Isotopic composition of uranium and thorium in crystalline rocks (Rosholt, J. N.)

joints see under style under fractures

lacustrine features see under geomorphology

land use see also under environmental geology

lava see also igneous rocks; magmas

lead-isotopes

ratios: The strontium isotope and rare-earth element systematics of nonsulfide minerals from the Illinois-Kentucky fluorspar district (Dickhaut, Lisa A.)

lead ores see also under economic geology

lead-zinc deposits see also under economic geology; see also under economic geology under Midwest; Mississippi Valley

lebensspuren see under biogenic structures under sedimentary structures

limestone see also under carbonate rocks under sedimentary rocks

limestone deposits see also under economic geology

liquid inclusions see fluid inclusions

loess see under clastic sediments under sediments; see under geochemistry under organic materials

magmas see also igneous rocks; intrusions

magmas--differentiation

fractional crystallization: Interpretation of core and well log physical properties data from drill hole UPH-3, Stephenson County, Illinois (Daniels, Jeffrey J.)

magnetic surveys see under geophysical surveys

Mammalia--Mastodontoida

Pleistocene: Mastodon bones in an Illinois cave (Fraszil, Geoffrey B.)

man, fossil see fossil man

manganese--geochemistry

bones: An evaluation of postdepositional changes in the trace element content of human bone (Nelson, Dorothy A.)

mapping see maps

maps see also under areal geology; economic geology; environmental geology; soils; see also under stratigraphy under Great Lakes region

maps--cartography

engineering geology maps: Stratigraphy and land-use applications; a case study in surficial geologic mapping of Madison County.

Illinois (Killey, Myrna M.)

mathematical geology see also automatic data processing meetings see symposia

metal ores see also under economic geology under Midwest

metals--geochemistry

sediments: Chemistry of bottom sediments from the Cal-Sag Channel and the Des Plaines and Illinois rivers between Joliet and Havana, Illinois (Harrison, W.)

shale: Enrichment of trace metals and organic carbon in shales of the New Albany Group (Frost, J. K.)

stream sediments: Selected metals in river sediment, water, and animals (Mathis, B. J.)

metamorphic rocks see also igneous rocks; metamorphism; metasomatism

metamorphic rocks--quartzites

lithostratigraphy: The Baraboo Interval; a tale of red quartzites (Dott, R. H., Jr.)

metamorphism see also metamorphic rocks; metasomatism

metamorphism--contact

metamorphism

processes: Oxygen isotopic and mineralogic studies of Precambrian granites from the Illinois Deep Hole Project (Shieh, Yuch-ning)

metasomatic rocks see also igneous rocks; metamorphic rocks; metamorphism; metasomatism

metasomatism see also metamorphism

metasomatism--processes

hydrothermal alteration: Oxygen isotope study of Precambrian granites from the Illinois Deep Hole Project (Shieh, Yuch-Ning)

methods see under absolute age; environmental geology; hydrogeology; mining geology

Midwest--areal geology

regional: Field trips in Midwestern geology (Shaver, Robert H.)

Midwest--economic geology

base metals: Mississippi valley type base metal deposits and the Illinois Basin; a genetic relationship? (Hansen, William B.)

coal: Origin and economic geology of the Springfield Coal Member in the Illinois Basin (Field trip 9) (Eggert, D. L.)

lead-zinc deposits:

Application of geology to the discovery of zinc-lead ore in the Wisconsin-Illinois-Iowa district (Agnew, Allen F.)

metal ores: Thin black Pennsylvanian-age shales of the Mid-continent U.S.: a neglected metallic resource? (Coveney, Raymond M., Jr.)

Midwest--engineering geology

earthquakes: Central Interior seismic source zones; summary of workshop convened June 10-11, 1980 (McKeown, F. A.)

Midwest--environmental geology

geologic hazards: Reconstruction of precipitation history in North American corn belt using tree rings (Blasing, T. J.)

pollution: Drainage quality at deep coal mine sites (Wirries, Dama L.)

Midwest--hydrogeology

ground water: Ground-water flow regime based on preliminary data for regional aquifer systems (Signor, D. C.)

Midwest--paleobotany

pteridophytes: *Kallostachys* is probably a *Palaeostachya* (Good, Charles W.)

-- The anatomy and three-dimensional morphology of *Annularia hoskinsii* sp n. (Good, Charles W.)

Midwest--sedimentary petrology

clay mineralogy: Clay minerals in thin loess, Ohio River basin, U.S.A. (Ruhe, Robert V.)

sedimentation: Aggraded fluvial and tide-dominated deltaic deposits of the Spoon Formation (Pennsylvanian) in the southern Illinois Basin; a shallow embayment (Ambrose, William Anthony)

Midwest--seismology

earthquakes: Revised hypocenters and correlation of seismicity and tectonics in the Central United States (Gordon, David Walker)

Midwest--soils

-- soil erosion: Soil erosion in the Corn Belt; problems and solutions (Fenton, Thomas E.)

Midwest--stratigraphy

Carboniferous: Multielement conodont species and ecological interpretation of the lower Osagean (Lower Carboniferous) conodont zonation from Midcontinent North America (Chauff, Karl M.)

Ordovician: Depositional environments of the St. Peter Sandstone of the Upper Midwest (Winfree, K. E.)

Pennsylvanian: Breezy Hill Limestone, a prelude to the major widespread Pennsylvanian cycloths of Midcontinent North America (Knight, Kimbell L.)

Midwest--structural geology

tectonics: Thermal contraction and flexure of intracratonal basins; a three-dimensional study of the Michigan Basin (Nunn, Jeffrey A.)

Midwest--tectonophysics

plate tectonics: Revised hypocenters and correlation of seismicity and tectonics in the Central United States (Gordon, David Walker)

-- The Baraboo Interval; a tale of red quartzites (Dott, R. H., Jr.)

mineral deposits,**genesis--barite deposits**

mississippi valley-type: Barite, its place and role in mississippi valley-type deposits (Zimmermann, R. A.)

mineral deposits,**genesis--base metals**

mississippi valley-type: Mississippi valley type base metal deposits and the Illinois Basin; a genetic relationship? (Hansen, William B.)

mineral deposits,**genesis--fluorspar**

mississippi valley-type: A supplemental report on the Cave In Rock fluorspar district, Hardin County, Illinois (Brecke, E. A.)

ore-forming fluids:

Temperature and salinity variations during ore deposition at the Deardorff Mine,

Cave-in-Rock District, Illinois (Richardson, Catherine K.)

-- The strontium isotope and rare-earth element systematics of nonsulfide minerals from the Illinois-Kentucky fluorspar district (Dickhaut, Lisa A.)

mineral deposits,

genesis--lead-zinc deposits mississippi valley-type: A burial diagenetic model for the emplacement of zinc-lead sulfide ores in the Upper Mississippi Valley, USA (Ludvigson, Gregory A.)

-- Geologic characteristics of three major Mississippi Valley districts (Heyl, Allen V.)

-- High-Zn-coals of Illinois; coal-hosted mississippi valley-type mineralization? (Whelan, Joseph F.)

-- Ore-depositing reactions in mississippi valley-type deposits (Barnes, H. L.)

-- The possible bearing of the granite of the UPH deep drill holes, northern Illinois, on the origin of Mississippi Valley ore deposits (Doe, Bruce R.)

mineral resources see also under economic geology

mineralogy

carbonates: Honeycomb calcite and other Ohio Valley delights (Pittman, Jon T.)

fluorides: Fluorite, the magical mineral (Watts, Alice Marie)

minerals see also crystal growth

minerals--fluorides

fluorite: Fluorite, the magical mineral (Watts, Alice Marie)

-- Temperature and salinity variations during ore deposition at the Deardorff Mine, Cave-in-Rock District, Illinois (Richardson, Catherine K.)

-- The strontium isotope and rare-earth element systematics of nonsulfide minerals from the Illinois-Kentucky fluorspar district (Dickhaut, Lisa A.)

minerals--sulfides

pyrite: Sulfur isotopic fractionation in the formation of pyrite from Upper Devonian black shales (Anderson, Thomas F.)

sphalerite: Temperature and salinity variations during ore deposition at the Deardorff Mine, Cave-in-Rock District, Illinois (Richardson, Catherine K.)

mining geology--methods

seismic methods: Detection of potential inundation hazards by overwater seismic methods (Miller, John J.)

mining geology--practice

underground mining: An erosional channel in the roof of the Illinois Herrin (No. 6) coal; implications for exploration (DeMaris, Philip J.)

mining geology--production control

coal: Geologic structures and horizontal stresses; their impact on petroleum and coal production in Illinois Basin (Lizak, John B.)

geologic hazards: Roof fall study of the Harrisburg (No. 5) Coal in portions of Saline and Williamson counties, Illinois (Rogers, Philip R.)

-- Tectonic faults and their influence on coal mining in Illinois (Nelson, W. John)

roof control: Petrographic investigation and examination of the thickness of the Brereton Limestone (Middle Pennsylvanian) in a portion of the Illinois Basin (Guzan, Michael John)

-- Petrography and thickness variations of Brereton Limestone Member (Carbondale Formation, Middle Pennsylvanian); an important roof-rock in part of Illinois Basin (Guzan, Michael J.)

roof support:

Geostatistical analysis of the facies and thickness variation in the Brereton Limestone and the Anna Shale in part of southwestern Illinois

(Cleaveland, Thomas H.)

miospores see under
palynomorphs

- Mississippi Valley--economic geology

lead-zinc deposits: The possible bearing of the granite of the UPH deep drill holes, northern Illinois, on the origin of Mississippi Valley ore deposits (Doe, Bruce R.)

Mississippi Valley--engineering geology

earthquakes: Central Interior seismic source zones; summary of workshop convened June 10-11, 1980 (McKeown, F. A.)

-- *Liquefaction potential in the central Mississippi Valley* (Obermeier, Stephen F.)

geologic hazards: Liquefaction potential in the central Mississippi Valley (Obermeier, Stephen F.)

Mississippi Valley--geophysical surveys

seismic surveys: Common-depth-point seismic-reflection survey on the Mississippi River in the vicinity of Alton, Illinois (Tirey, G. B.)

-- *U.S. Geological Survey common-depth-point seismic-reflection survey between Mississippi River miles 195 and 210 (R/V Neecho, cruise NE-80-3)* (Winget, E. A.)

Mississippi Valley--stratigraphy

Mississippian: Calcareous microfossils from the Mississippian Keokuk Limestone and adjacent formations, Upper Mississippi River valley; their meaning for North American and intercontinental correlation (Brenckle, Paul L.)

Ordovician: Correlation of K-bentonites in the Decorah Subgroup of the Mississippi Valley by chemical fingerprinting (Kolata, Dennis R.)

-- *Deposition and diagenesis of the Galena Group in the Upper Mississippi Valley* (Delgado, David J.)

Quaternary: The late Wisconsinan Savanna Terrace in tributaries to the upper Mississippi River (Flock, Mark A.)

Mississippi Valley--structural geology

tectonics: Structural history of southern Illinois and upper Mississippi Embayment (Schwab, Howard R.)

Mississippian see also under stratigraphy; see also under stratigraphy under Mississippi Valley

mollusks--paleoecology

Mississippian: Middle Chesterian (Golconda) marine deltaic paleocommunities from the Illinois Basin (Kelly, Stuart M.)

Pennsylvanian: Paleoecology and environments of deposition of the Brereton Limestone Member (Pennsylvanian, Desmoinesian) in southwestern Illinois (O'Connell, Dennis B.)

natural gas see also under economic geology

nickel--geochemistry

black shale: Physical and chemical characterization of Devonian gas shale; quarterly status report October 1, 1980-December 31, 1980 (Zielinski, R. E.)

nitrogen--geochemistry

black shale: Physical and chemical characterization of Devonian gas shale; quarterly status report October 1, 1980-December 31, 1980 (Zielinski, R. E.)

North America see also Great Lakes; Great Lakes region; Great Plains; United States

North America--geochronology

Holocene: Reconstruction of precipitation history in North American corn belt using tree rings (Blasing, T. J.)

Northern Hemisphere see also North America

nuclear facilities see also under engineering geology; see also under engineering geology under automatic data processing; United States

oil and gas fields see also under economic geology

oil shale see also under economic geology under United States

oolite see also under carbonate rocks under

sedimentary rocks

Ordovician see also under stratigraphy; see also under stratigraphy under Great Lakes region; Midwest; Mississippi Valley

organic materials--geochemistry

loess: Clay minerals in thin loess, Ohio River basin, U.S.A. (Ruhe, Robert V.)

sediments: Environmental fates of polychlorinated dioxins and furans as determined from sediment cores (Czuczwa, Jean M.)

-- *Organic matter alterations during sinking of sediment particles in Lake Michigan* (Meyers, Philip A.)

shale: Enrichment of trace metals and organic carbon in shales of the New Albany Group (Frost, J. K.)

Ostracoda see also ostracods

ostracods--biostratigraphy

Pleistocene: Late Cretaceous marine foraminifers from Pleistocene fluviolacustrine deposits in eastern Missouri (Thompson, Thomas L.)

Silurian: Silurian reef and interreef strata as responses to a cyclical succession of environments, southern Great Lakes area (Field trip 12) (Shaver, Robert H.)

ostracods--paleoecology

Mississippian: Middle Chesterian (Golconda) marine deltaic paleocommunities from the Illinois Basin (Kelly, Stuart M.)

Pennsylvanian: Paleoecology and environments of deposition of the Brereton Limestone Member (Pennsylvanian, Desmoinesian) in southwestern Illinois (O'Connell, Dennis B.)

oxygen--geochemistry

black shale: Physical and chemical characterization of Devonian gas shale; quarterly status report October 1, 1980-December 31, 1980 (Zielinski, R. E.)

oxygen--isotopes

- O-18/O-16: High-Zn-coals of Illinois; coal-hosted mississippi valley-type mineralization? (Whelan, Joseph F.)
- Oxygen isotope study of Precambrian granites from the Illinois Deep Hole Project (Shieh, Yuch-Ning)
- Oxygen isotopic and mineralogic studies of Precambrian granites from the Illinois Deep Hole Project (Shieh, Yuch-ning)
- Oxygen isotopic compositions of minerals from Illinois Deep Drill Hole granites (Kombrink, Mark)

paleobotany

- algae*: A new species of *Asphaltina* from the Grand Tower Limestone of southern Illinois (Devera, Joseph A.)
- Algal compressions from the Mississippian of the Illinois Basin (Jennings, James R.)
- angiosperms*: Wood patterns in an Upper Cretaceous flora from southern Illinois (Lee, Michael R.)
- gymnosperms*: Structure affinity, and phylogeny of *Dolerotheca formosa* (Dufek, Debra A.)
- The synangiate nature of *Dolerotheca* (Stidd, Benton M.)
- The taxonomy of *Conostoma leptospermum* and *C. platyspermum* (Rothwell, Gar W.)
- *Trigonocarpus leeanus*, a new species from the Middle Pennsylvanian of southern Illinois (Gastaldo, Robert A.)
- palynomorphs*: An anatomically preserved *Potomia* with *in situ* spores from the Pennsylvanian of Illinois (Stidd, Benton M.)
- Spore patterns in the Indiana Coal V in the Middle Pennsylvanian near a paleochannel (Mahaffy, James F.)
- *Stewartiotheca* gen. n. and the nature and origin of complex permineralized medullosan pollen organs (Eggert, D. A.)
- Plantae*: *Acaulangium* gen. n., a fertile marattialean from the Upper Pennsylvanian of Illinois

(Millay, Michael A.)

- pteridophytes*: A new species of *Trigonocarpus Brongniart* from southern Illinois (Gastaldo, Robert A.)
- A new taxon of fertile marattialean foliage (Millay, Michael A.)
- A preliminary report on a *Calamostachys* from the Middle Pennsylvanian of southern Illinois (Gastaldo, Robert A.)
- An unusual botryopterid sporangial aggregation from the Middle Pennsylvanian of North America (Millay, M. A.)
- Cauline vasculature and leaf trace production in medullosan pteridosperms (Basinger, James F.)
- Cormose lycopod bases from Mazon Creek and the phylogeny of the lycopods (Pigg, Kathleen B.)
- Ecotypic variation in *Tepidodendron dicentrum* *Felix* (DiMichele, William A.)
- *Lacoea* with sporangia from Rock Island, Illinois (Leary, Richard L.)
- Microgametophyte development in the Paleozoic seed fern family *Callistophytaceae* (Millay, M. A.)
- Morphology of *Microspermopteris* and occurrences in Middle Pennsylvanian coal balls (Mahaffy, James F.)
- *Palaeostachya dircei* n. sp., an authigenically cemented equisetalean strobilus from the Middle Pennsylvanian of southern Illinois (Gastaldo, Robert A.)
- *Paralycopodites Morey & Morey*, from the Carboniferous of Euramerica; a reassessment of generic affinities and evolution of "Lepidodendron" *brevifolium* Williamson (DiMichele, William A.)
- Probable attachment of the *Dolerotheca campanulum* to a *Myeloxylon-Alethopteris* type frond (Ramanujam, C. G. K.)
- Studies of Paleozoic ferns (Dennis, Robert L.)
- The frond of *Heterangium* (Shadle, Gary L.)

- The morphology and relationships of *Rhodea*, *Telangium*, *Telangiopsis*, and *Heterangium* (Jennings, James R.)
- The phloem of *Lepidodendron* (Eggert, Donald A.)

Paleocene see also under stratigraphy**paleoclimatology--Holocene**

- Midwest*: Reconstruction of precipitation history in North American corn belt using tree rings (Blasing, T. J.)

paleoecology--Arthropoda

- Mississippian*: The paleoecology of malacostracan arthropods in the Bear Gulch Limestone (Namurian) of central Montana (Factor, David F.)

paleoecology--conodonts

- Carboniferous*: Multielement conodont species and ecological interpretation of the lower Osagean (Lower Carboniferous) conodont zonation from Midcontinent North America (Chauff, Karl M.)

paleoecology--invertebrates

- Mississippian*: Middle Chesterian (Golconda) marine deltaic paleocommunities from the Illinois Basin (Kelly, Stuart M.)

- Petrology, paleoecology, and depositional environments of a micritic limestone in Cave Hill Member of Kinkaid Formation (Mississippian, Chesterian), southern Illinois (Hakkio, Lisa B.)

paleoecology--Mississippian

- Midwest*: Paleontology and stratigraphy of strata associated with the basal Chesterian in its type region (Jennings, James R.)

paleoecology--palynomorphs

- Quaternary*: Late-glacial and postglacial pollen studies from the Zuehl Farm site, north-central Iowa and the Cattail Channel Bog, northwestern Illinois (Kim, Hyung Keun)

paleoecology--Pennsylvanian

- Biofacies and Habitats of Brereton Limestone Member (Carbondale Formation, Middle Pennsylvanian), southwestern Illinois (D'Connell, Dennis B.)*

-- Paleoecology and environments of deposition of the Brereton Limestone Member (Pennsylvanian, Desmoinesian) in southwestern Illinois (O'Connell, Dennis B.)

-- Paleoecology of an estuarine-deltaic biota; community-habitat mosaic of the Pennsylvanian Mazon Creek fauna in Northeast Illinois (Baird, Gordon C.)

paleoecology--Plantae

Paleozoic: Plants of Devonian-Mississippian black shales, Eastern Interior, U.S.A. (Cross, Aureal T.)

paleogeography--Pennsylvanian

Aggraded fluvial and tide-dominated deltaic deposits of the Spoon Formation (Pennsylvanian) in the southern Illinois Basin; a shallow embayment (Ambrose, William Anthony)

Midwest: Aggraded fluvial and tide-dominated deltaic deposits of the Spoon Formation (Pennsylvanian) in the southern Illinois Basin; a shallow embayment (Ambrose, William Anthony)

paleogeography--Silurian

Midwest: Silurian reef and interreef strata as responses to a cyclical succession of environments, southern Great Lakes area (Field trip 12) (Shaver, Robert H.)

paleontology

Conodonta: Natural assemblages of elements; interpretation and taxonomy (Rhodes, F. H. T.)

Echinodermata: Ophiocistoid (?) ossicles from the McCraney Limestone (Lower Mississippian) of western Illinois (Maliva, Robert G.)

Insecta: New Homopteridae (Insecta: Paleodictyoptera) with wing articulation from Upper Carboniferous strata of Mazon Creek, Illinois (Kukalova-Peck, Jarmila)

-- The Mazon Creek nodules (Konechy, Jim)

Invertebrates: Fossils (King, James E.)

Mammalia: Mastodon bones in an Illinois cave (Frasz, Geoffrey B.)

Paleosols see under clastic sediments under sediments
paleotemperature see geologic thermometry under fluid inclusions

Paleozoic see also under geochronology; stratigraphy

palyynomorphs--megaspores

Pennsylvanian: An anatomically preserved Potonia with in situ spores from the Pennsylvanian of Illinois (Stidd, Benton M.)

-- Stewartiotheca gen. n. and the nature and origin of complex permineralized medullosan pollen organs (Eggert, D. A.)

palyynomorphs--miospores

Carboniferous: Comparison of miospore assemblages in the Pennsylvanian System of the Illinois Basin with those in the Upper Carboniferous of Western Europe (Peppers, Russell A.)

Mississippian: Spores from Chesterian coals of the Illinois Basin (Kosanke, Robert M.)

Pennsylvanian: Revision of nomenclature for the Springfield (No. 5) Coal Member of Illinois (Trask, C. Brian)

-- Spore patterns in the Indiana Coal V in the Middle Pennsylvanian near a paleochannel (Mahaffy, James F.)

Quaternary: Late-glacial and postglacial pollen studies from the Zuehl Farm site, north-central Iowa and the Cattail Channel Bog, northwestern Illinois (Kim, Hyung Keun)

paragenesis--barite deposits

United States: Barite, its place and role in mississippi valley-type deposits (Zimmermann, R. A.)

paragenesis--fluorspar

Temperature and salinity variations during ore deposition at the Deardorff Mine, Cave-in-Rock District, Illinois (Richardson, Catherine K.)

-- The strontium isotope and rare-earth element systematics of nonsulfide minerals from the Illinois-Kentucky fluorspar district (Dickhaut, Lisa A.)

paragenesis--lead-zinc deposits

Ore-depositing reactions in mississippi valley-type deposits (Barnes, H. L.)

Pennsylvanian see also under stratigraphy; see also under stratigraphy under Midwest

petroleum see also under economic geology

petrology

igneous rocks:

Interpretation of core and well log physical properties data from drill hole UPH-3, Stephenson County, Illinois (Daniels, Jeffrey J.)

-- Petrographic and physical factors controlling thermal conductivity of granitic rocks in Illinois deep holes UPH 1, 2, and 3 (Eckstein, Y.)

-- Petrology and physical properties of granites from the Illinois deep hole in Stephenson County (Lidiak, Edward G.)

intrusions: Oxygen isotopic and mineralogic studies of Precambrian granites from the Illinois Deep Hole Project (Shieh, Yuch-ning)

phosphorus--geochemistry

soils: Evaluation of soil tests as a measure of phosphorus and potassium availability in Illinois coal waste (Lewis, B. G.)

physical geography see

geomorphology

Plantae see also algae; algal flora; angiosperms; bacteria; ferns; gymnosperms; palynomorphs; problematic fossils; pteridophytes

Plantae--floral studies

Devonian: Plants of Devonian-Mississippian black shales, Eastern Interior, U.S.A. (Cross, Aureal T.)

Pennsylvanian: Acaulangium gen. n., a fertile marattialean from the Upper Pennsylvanian of Illinois (Millay, Michael A.)

Plantae--miscellanea

collecting: Fossils (King, James E.)

Plantae--paleoecology

Mississippian: Paleontology and stratigraphy of strata associated with the basal Chesterian in its type region (Jennings, James

R.)

plate tectonics see also under tectonophysics under Great Plains; Midwest

Pleistocene see also under geochronology; stratigraphy

plutons see under intrusions

pollution see also under environmental geology; waste disposal; see also under environmental geology under Eastern U.S.; Midwest

potassium--geochemistry

soils: Evaluation of soil tests as a measure of phosphorus and potassium availability in Illinois coal waste (Lewis, B. G.)

Precambrian see also under geochronology; stratigraphy

problematic fossils--problematic microfossils

Mississippian: Calcareous microfossils from the Mississippian Keokuk Limestone and adjacent formations, Upper Mississippi River valley; their meaning for North American and intercontinental correlation (Brenckle, Paul L.)

problematic microfossils see under problematic fossils

Proterozoic see also under geochronology; stratigraphy

pteridophytes see also ferns

pteridophytes--Filicopsida

Pennsylvanian: A new taxon of fertile marattialean foliage (Millay, Michael A.)

-- An unusual botryopterid sporangial aggregation from the Middle Pennsylvanian of North America (Millay, M. A.)

-- The frond of *Heterangium* (Shadie, Gary L.)

pteridophytes--floral studies

Carboniferous: *Lacoea* with sporangia from Rock Island, Illinois (Leary, Richard L.)

Pennsylvanian: A new species of *Trigonocarpus Brongniart* from southern Illinois (Gastaldo, Robert A.)

-- Morphology of *Microspermopteris* and occurrences in Middle Pennsylvanian coal balls (Mahaffy, James F.)

-- Probable attachment of the *Dolerotheca campanulum* to a *Myeloxylon-Alethopteris*

type frond (Ramanujam, C. G. K.)

-- Studies of Paleozoic ferns (Dennis, Robert L.)

pteridophytes--Lycopida

Carboniferous: Cormose lycopod bases from Mazon Creek and the phylogeny of the lycopods (Pigg, Kathleen B.)

-- *Paralycopodites* Morey & Morey, from the Carboniferous of Euramerica; a reassessment of generic affinities and evolution of "Lepidodendron" (*brevifolium* Williamson (DiMichele, William A.))

Pennsylvanian: Ecotypic variation in *Tepidodendron dicentrum* *Felix* (DiMichele, William A.)

-- The phloem of *Lepidodendron* (Eggert, Donald A.)

pteridophytes--morphology

Pennsylvanian: Microgametophyte development in the Paleozoic seed fern family *Callistophytaceae* (Millay, M. A.)

pteridophytes--Sphenopsida

Mississippian: The morphology and relationships of *Rhodea*, *Telangium*, *Telangiopsis*, and *Heterangium* (Jennings, James R.)

Pennsylvanian: A preliminary report on a *Calamostachys* from the Middle Pennsylvanian of southern Illinois (Gastaldo, Robert A.)

-- *Kallostachys* is probably a *Palaeostachya* (Good, Charles W.)

-- *Palaeostachya dircei* n. sp., an authigenically cemented equisetalean strobilus from the Middle Pennsylvanian of southern Illinois (Gastaldo, Robert A.)

-- Taxonomic characteristics of sphenophyllalean cones (Good, Charles W.)

-- The anatomy and three-dimensional morphology of *Annularia hoskinsii* sp. n. (Good, Charles W.)

pteridophytes--taxonomy

Pennsylvanian: Cauline vasculature and leaf trace production in medullosan pteridosperms (Basinger,

James F.)

pyrite see under sulfides

under minerals

quartz see under interpretation under fluid inclusions

Quaternary see also under stratigraphy; see also under stratigraphy under Great Lakes region; Mississippi Valley

radioactive dating see absolute age

radiocarbon dating see absolute age

radiolarians--biostratigraphy

Cretaceous: Late Cretaceous marine foraminifers from Pleistocene fluviolacustrine deposits in eastern Missouri (Thompson, Thomas L.)

rare earths--geochemistry

granites: Trace element geochemistry of Precambrian granite from northern Illinois Deep Drill Hole UPH-3 (Schulz, Klaus J.)

limestone: The strontium isotope and rare-earth element systematics of nonsulfide minerals from the Illinois-Kentucky fluorspar district (Dickhaut, Lisa A.)

reclamation see also under environmental geology; see also under environmental geology under United States

reefs see also under sedimentary petrology; see also under sedimentary petrology under Great Lakes region

remote sensing see also geophysical methods; geophysical surveys; see also under geophysical surveys under automatic data processing

remote sensing--interpretation

Landsat: Landsat-4 data quality analysis (Anuta, Paul)

reservoir rocks see under electrical logging under well-logging; see under petroleum engineering under engineering geology

reservoirs--dams

failures: Sensitivity of outflow peaks and flood stages to the selection of dam breach parameters and simulation models (Singh, Krishan P.)

rock mechanics see also soil mechanics

rock mechanics--applications

land use: Stratigraphy and land-use applications; a case study in surficial geologic mapping of Madison County, Illinois (Killey, Myrna M.)

rock mechanics--deformation

stress: Geologic structures and horizontal stresses; their impact on petroleum and coal production in Illinois Basin (Lizak, John B.)

rock mechanics--failures

testing: In-situ monitoring of coal mine floor heave (Stephenson, Richard W.)

rock mechanics--materials, properties

granites: Illinois Deep Hole Project (Anonymous)

-- Interpretation of core and well log physical properties data from drill hole UPH-3, Stephenson County, Illinois (Daniels, Jeffrey J.)

-- Introduction to the Illinois Deep Hole Project (Coates, M. S.)

-- Petrographic and physical factors controlling thermal conductivity of granitic rocks in Illinois deep holes UPH 1, 2, and 3 (Eckstein, Y.)

-- Petrology and physical properties of granites from the Illinois deep hole in Stephenson County (Lidiak, Edward G.)

sandstone see also under clastic rocks under sedimentary rocks

sedimentary petrology

clay mineralogy: Clay minerals in thin loess, Ohio River basin, U.S.A. (Ruhe, Robert V.)

diagenesis: Coalification of tissues (medullosan seed fern) in a coal ball of the "Herrin (No. 6) Coal Member" of the Carbondale Formation, Illinois Basin (Hatcher, Patrick G.)

-- The effects of depositional environment and diagenesis on the porosity and permeability in the Salem Limestone in Union and Monroe counties, southern Illinois (Jaeger, Paul)

reefs: Silurian reef and interreef strata as responses to a cyclical

succession of environments, southern Great Lakes area (Field trip 12) (Shaver, Robert H.)

-- The application of remote sensing to the detection of Niagara pinncale reefs in the Illinois Basin (Lovely, Daniel Arthur)

sedimentary rocks: A petrographic study of the Backbone (Little Saline) Limestone (Lower Devonian) in southwestern Illinois and southeastern Missouri (Lange, Rolf V.)

-- Classification of clastic sediments in Pennsylvanian coal-bearing formations emphasizing mudrock lithology (Chen, Pei-Yuan)

-- Coal-ball formation in the Herrin Coal, Franklin County, Illinois (DeMaris, Philip J.)

-- Effects of overbank deposition on the quality and maceral composition of the Herrin (No. 6) coal (Pennsylvanian) of southern Illinois (Kravits, C. M.)

-- Mineralogical composition of coal ash calculated from mass-balance equations (Fang, J. H.)

-- Petrography and thickness variations of Brereton Limestone Member (Carbondale Formation, Middle Pennsylvanian); an important roof-rock in part of Illinois Basin (Guzan, Michael J.)

-- Pore geometry and permeability of the St. Peter Sandstone in the Illinois Basin (Kreutzfeld, James E.)

-- Relationship between geochemistry of coal and the nature of strata overlying the Herrin Coal in the Illinois Basin (Chou, Chen-Lin)

-- Spectral analysis of fluorescent macerals in the Herrin No. 6 coal seam (Crelling, John C.)

-- The origin of mottled dolomitic limestones in the Platteville Group (Ordovician) of northern Illinois (Dathe, David B.)

-- The petrology and petrography of the Mt.

Simon and pre-Mt. Simon sandstones; evidence for possible Precambrian rifting in the central Midcontinent (Kersting, Joseph Jeffrey)

-- Tide-dominated deltaic deposits of the Spoon Formation (Pennsylvanian) in a narrow, subsiding trough, southern Illinois (Ambrose, William Anthony)

sedimentary structures: Fabric of the clastic component of Carboniferous concretions and their enclosing matrix (Woodland, Bertram G.)

-- Geologic disturbances in Illinois coal seams (Nelson, W. John)

-- Trace fossils within limestone interbeds, Oak Grove Member, Carbondale Formation (Pennsylvanian, Desmoinesian), northwestern Illinois (Merrill, Glen K.)

sedimentation: Aggraded fluvial and tide-dominated deltaic deposits of the Spoon Formation (Pennsylvanian) in the southern Illinois Basin; a shallow embayment (Ambrose, William Anthony)

-- Depositional and diagenetic environments of carbonate-siliciclastic rocks of the Glen Dean Formation (Upper Mississippian), Illinois Basin, U.S.A. (Feiznia, Sadat)

-- Depositional events recorded in the Francis Creek Shale; taphonomy of the Pennsylvanian Mazon Creek locality in Illinois (Baird, Gordon C.)

-- Facies and depositional environments of Energy Shale Member (Carbondale Formation, Pennsylvanian), southwestern Jefferson County, Illinois (Burk, Mitchell Keith)

-- Runoff and sediment transport from an agricultural watershed in northern Illinois (Allen, H. E., Jr.)

sediments: Deposition of bottom sediment in Lake Ellyn, Glen Ellyn, Illinois (Cowan, Ellen Anne)

-- Importance of the reworking process to certain properties of

basal tills deposited by the Laurentide ice sheet in Iowa and Illinois, U.S.A. (Kemmis, T. J.)

-- Long-term sediment yields from Bay Creek, Pike County, Illinois (Lazaro, T. R.)

sedimentary rocks see also **sedimentary structures; sedimentation; sediments**

sedimentary rocks--carbonate rocks

deposition: Deposition and diagenesis of the Galena Group in the Upper Mississippi Valley (Delgado, David J.)

dolostone: Diagenetic history and fluid migration pathways of Silurian formations, Michigan Basin (Brand, Uwe)

limestone: A petrographic study of the Backbone (Little Saline) Limestone (Lower Devonian) in southwestern Illinois and southeastern Missouri (Lange, Rolf V.)

-- Biofacies and habitats of Brereton Limestone Member (Carbondale Formation, Middle Pennsylvanian), southwestern Illinois (O'Connell, Dennis B.)

-- The origin of mottled dolomitic limestones in the Platteville Group (Drdovician) of northern Illinois (Dathe, David B.)

-- Trace fossils within limestone interbeds, Oak Grove Member, Carbondale Formation (Pennsylvanian, Desmoinesian), northwestern Illinois (Merrill, Glen K.)

lithostratigraphy: Oolitic strata of the Keel Formation and Edgewood Group (Late Drdovician and Early Silurian), Texas Panhandle to the Mississippi Valley (Amsden, Thomas W.)

micrite: Petrology, paleoecology, and depositional environments of a micritic limestone in Cave Hill Member of Kinkaid Formation (Mississippian, Chesterian), southern Illinois (Hakkio, Lisa B.)

oolite: Dolites at the Drdovician-Silurian boundary in Illinois

(Kluessendorf, Joanne)

petrography: Petrography and thickness variations of Brereton-Limestone Member (Carbondale Formation, Middle Pennsylvanian); an important roof-rock in part of Illinois Basin (Guzan, Michael J.)

sedimentary rocks--clastic rocks

bentonite: Correlation of K-bentonites in the Decorah Subgroup of the Mississippi Valley by chemical fingerprinting (Kolata, Dennis R.)

black shale: Sulfur isotopic fractionation in the formation of pyrite from Upper Devonian black shales (Anderson, Thomas F.)

-- The Turner Mine Shale Member; a newly named stratigraphic unit of the Carbondale Formation (Nelson, W. John)

-- Thin black Pennsylvanian-age shales of the Mid-continent U.S.; a neglected metallic resource? (Coveney, Raymond M., Jr.)

classification: Classification of clastic sediments in Pennsylvanian coal-bearing formations emphasizing mudrock lithology (Chen, Pei-Yuan)

diagenesis: Pore geometry and permeability of the St. Peter Sandstone in the Illinois Basin (Kreutzfeld, James E.)

glaucconitic composition: The stratigraphic position of Paleocene foraminifera from Kentucky and Illinois (Fluegeman, Richard H., Jr.)

lithofacies: Drowned barrier bar and tidal inlet sequences in Buckner-Sesser-Valier fields, Franklin County, Illinois (Young, Victor R.)

-- Facies and depositional environments of Energy Shale Member (Carbondale Formation, Pennsylvanian), southwestern Jefferson County, Illinois (Burk, Mitchell Keith)

mudstone: Fabric of the clastic component of Carboniferous concretions and their enclosing matrix

(Woodland, Bertram G.)

sandstone: Aux Vases-Renault-Yankeetown depositional sequence in comparison to other Chesterian depositional sequences (Jennings, James R.)

-- Depositional environments of the St. Peter Sandstone of the Upper Midwest (Winfree, K. E.)

-- Stratigraphic traps and deposition of Aux Vases and uppermost Ste. Genevieve formations (Mississippian), southern Illinois (Seyler, Beverly J.)

sedimentary rocks--environmental analysis

deltaic environment: Tide-dominated deltaic deposits of the Spoon Formation (Pennsylvanian) in a narrow, subsiding trough, southern Illinois (Ambrose, William Anthony)

nearshore environment: Depositional and diagenetic environments of carbonate-siliciclastic rocks of the Glen Dean Formation (Upper Mississippian), Illinois Basin, U.S.A. (Feiznia, Sadat)

sedimentary rocks--geochemistry

trace elements: Enrichment of trace metals and organic carbon in shales of the New Albany Group (Frost, J. K.)

-- Relationship between geochemistry of coal and the nature of strata overlying the Herrin Coal in the Illinois Basin (Chou, Chen-Lin)

sedimentary rocks--lithofacies environmental analysis:

Aggrated fluvial and tide-dominated deltaic deposits of the Spoon Formation (Pennsylvanian) in the southern Illinois Basin; a shallow embayment (Ambrose, William Anthony)

-- Facies and depositional environments of the Energy Shale (Pennsylvanian) in southwestern Jefferson County, Illinois (Burk, Mitchell Keith)

-- Facies, formation boundaries, and chronostratigraphy in the

sedimentary rocks/sedimentary structures

- upper part of the New Albany Shale Group (Devonian-Mississippian) in the Illinois Basin (Reinbold, Mark L.)
- Geostatistical analysis of the facies and thickness variation in the Brereton Limestone and the Anna Shale in part of southwestern Illinois (Cleaveland, Thomas H.)
- Middle Chesterian (Golconda) marine deltaic paleocommunities from the Illinois Basin (Kelly, Stuart M.)
- Paleoecology and environments of deposition of the Brereton Limestone Member (Pennsylvanian, Desmoinesian) in southwestern Illinois (O'Connell, Dennis B.)
- Passage-time characteristics of Pennsylvanian sequences in Illinois (Doveton, John H.)
- Petrographic investigation and examination of the thickness of the Brereton Limestone (Middle Pennsylvanian) in a portion of the Illinois Basin (Guzan, Michael John)
- The effects of depositional environment and diagenesis on the porosity and permeability in the Salem Limestone in Union and Monroe counties, southern Illinois (Jaeger, Paul)
- sedimentary structures:**
 - Roof fall study of the Harrisburg (No. 5) Coal in portions of Saline and Williamson counties, Illinois (Rogers, Philip R.)
- sedimentary rocks--lithostratigraphy**
 - Mississippian:** Paleontology and stratigraphy of strata associated with the basal Chesterian in its type region (Jennings, James R.)
 - Ordovician:** Lithostratigraphy and depositional environments of the Maquoketa Group (Ordovician) in northern Illinois (Kolata, Dennis R.)
 - Maquoketa Shale Group of northern Illinois (Kolata,
- Dennis R.)
- unconformities:** Where have all the sediments gone? fission track dating of the Illinois Deep Hole core (Zimmermann, Robert A.)
- sedimentary rocks--organic residues**
 - coal:** Coal-ball formation in the Herrin Coal, Franklin County, Illinois (DeMaris, Philip J.)
 - Coalification of tissues (medullous seed fern) in a coal ball of the "Herrin (No. 6) Coal Member" of the Carbondale Formation, Illinois Basin (Hatcher, Patrick G.)
 - Effects of overbank deposition on the quality and maceral composition of the Herrin (No. 6) coal (Pennsylvanian) of southern Illinois (Kravits, C. M.)
 - Geochemistry of trace elements and sulfur in the Springfield (No. 5) Coal in the Illinois Basin (Chou, C. L.)
 - Geologic disturbances in Illinois coal seams (Nelson, W. John)
 - Geology of the Herrin (No. 6) coal and associated strata at Old Ben No. 24, Franklin County, Illinois (Demaris, Philip J.)
 - Inorganic geochemistry of Illinois Basin coals (Chou, Chen-Lin)
 - Mineral matter and trace elements in the Herrin (No. 6) Coal in the Illinois Basin (Fiene, F. L.)
 - Mineralogical composition of coal ash calculated from mass-balance equations (Fang, J. H.)
 - Non-marine and marine influenced Herrin Coal and associated roof shales from southern Illinois; a mineralogical and statistical analysis (Stutzman, Paul E.)
 - Revision of nomenclature for the Springfield (No. 5) Coal Member of Illinois (Trask, C. Brian)
 - Stable isotope evidence for the origin of sulfur in coal (Westgate, Linda M.)
- Stratigraphic correlations of Seelyville, De Koven, and Davis coals (Desmoinesian) of Illinois Basin coalfield (Jacobson, Russell J.)
- The occurrence and distribution of mineral matter in coal lithotypes in the Herrin (No. 6) Coal seam under marine and nonmarine influences (Baumann, Dean R.)
- Trace and minor element analyses of the Hymera Coal Member of Indiana (Coal VI) (Heberton, Richard P.)
- Variations in the forms and occurrences of sulfur in the Herrin No. 6 coal seam in southern Illinois (Crelling, John C.)
- macerals:** Spectral analysis of fluorescent macerals in the Herrin No. 6 coal seam (Crelling, John C.)
- The effects of overbank deposition on the quality and maceral composition of the Herrin (No. 6) Coal of southern Illinois (Kravits, Christopher M.)
- sedimentary rocks--properties**
 - reservoir properties:** Geologic factors influencing reservoir performance at Texaco's Salem Tertiary recovery project, Marion County, Illinois (Dahl, H. M.)
- sedimentary rocks--textures**
 - sedimentary structures:** The Mazon Creek nodules (Konecny, Jim)
- sedimentary structures see also sedimentary rocks; sediments**
- sedimentary structures--biogenic structures**
 - bioturbation:** Petrology, paleoecology, and depositional environments of a micritic limestone in Cave Hill Member of Kinkaid Formation (Mississippian, Chesterian), southern Illinois (Hakkio, Lisa B.)
- lebensspuren:** The origin of mottled dolomitic limestones in the Platteville Group (Ordovician) of northern Illinois (Dathe, David B.)
- Trace fossils within limestone interbeds, Oak Grove Member, Carbondale

Formation (Pennsylvanian, Desmoinesian), northwestern Illinois (Merrill, Glen K.) reefs: The application of remote sensing to the detection of Niagaran pinnacle reefs in the Illinois Basin (Lovely, Daniel Arthur)

sedimentary structures--interpretation

coal balls: Coal-ball formation in the Herrin Coal, Franklin County, Illinois (DeMaris, Philip J.)

sedimentary structures--planar bedding structures

channels: Geologic disturbances in Illinois coal seams (Nelson, W. John)

cross-bedding: Drowned barrier bar and tidal inlet sequences in Buckner-Sesser-Valier fields, Franklin County, Illinois (Young, Victor R.)

cyclothsems: Changing concepts of Midcontinent Pennsylvanian cyclothsems, North America (Heckel, Philip H.)

-- Passage-time characteristics of Pennsylvanian sequences in Illinois (Doveton, John H.)

environmental analysis: Depositional environments of the St. Peter Sandstone of the Upper Midwest (Winfree, K. E.)

sedimentary structures--secondary structures

concretions: Depositional events recorded in the Francis Creek Shale; taphonomy of the Pennsylvanian Mazon Creek locality in Illinois (Baird, Gordon C.)

-- Fabric of the clastic component of Carboniferous concretions and their enclosing matrix (Woodland, Bertram G.)

-- The Mazon Creek nodules (Konecny, Jim)

sedimentary structures--soft sediment deformation

clastic dikes: High-Zn-coals of Illinois; coal-hosted mississippi valley-type mineralization? (Whelan, Joseph F.)

sedimentation--controls

tectonic controls:

- Structural history of southern Illinois and upper Mississippi Embayment (Schwalb, Howard R.)
- The Baraboo Interval; a tale of red quartzites (Dott, R. H., Jr.)
- Thermal contraction and flexure of intracratonal basins; a three-dimensional study of the Michigan Basin (Nunn, Jeffrey A.)

sedimentation--cyclic processes

cyclothsems: Breezy Hill Limestone, a prelude to the major widespread Pennsylvanian cyclothsems of Midcontinent North America (Knight, Kimbell L.)

sedimentation--deposition environment:

Lithostratigraphy and depositional environments of the Moquoketa Group (Ordovician) in northern Illinois (Kolata, Dennis R.)

models: Crinoid arenite banks and crinoid wacke inertia flows; a depositional model for the Burlington Limestone (Middle Mississippian), Illinois, Iowa, and Missouri, USA (Carozzi, Albert V.)

taphonomy: Depositional events recorded in the Francis Creek Shale; taphonomy of the Pennsylvanian Mazon Creek locality in Illinois (Baird, Gordon C.)

sedimentation--environment

deltaic environment: Middle Chesterian (Golconda) marine deltaic paleocommunities from the Illinois Basin (Kelly, Stuart M.)

-- The Mazon Creek nodules (Konecny, Jim)

-- Tide-dominated deltaic deposits of the Spoon Formation (Pennsylvanian) in a narrow, subsiding trough, southern Illinois (Ambrose, William Anthony)

fluvial environment: An erosional channel in the roof of the Illinois Herrin (No.6) coal; implications for exploration (DeMaris,

Philip J.)

glacial environment: Evidence for stagnant ice in the Chain O'Lakes Lowland during deposition of Haeger and Wadsworth till (Hansel, Ardith K.)

-- Lithofacies in the Bateson Till Member, Wedron Formation at two sites in eastern Illinois (von Rhee, Robert W.)

-- Sedimentological interpretation of the Belgium Member, Banner Formation, eastern Illinois (Johnson, W. Hilton)

-- Stratigraphic reassessment of the Hagarstown Member in Illinois (Killey, Myrna M.)

-- Stratigraphy of the Wedron and Trafalgar formations (Wisconsinan) in east-central Illinois and west-central Indiana (Field trip 3) (Kempton, John P.)

glacioluvial environment: The late Wisconsinan Savanna Terrace in tributaries to the upper Mississippi River (Flock, Mark A.)

indicators: Relationship between geochemistry of coal and the nature of strata overlying the Herrin Coal in the Illinois Basin (Chou, Chen-Lin)

interpretation: Depositional environments of the St. Peter Sandstone of the Upper Midwest (Winfree, K. E.)

-- Maquoketa Shale Group of northern Illinois (Kolata, Dennis R.)

lacustrine environment: Age and origin of the late Wisconsinan Deer Plain Terrace in the Illinois Valley (Hajic, Edwin R.)

-- Organic matter alterations during sinking of sediment particles in Lake Michigan (Meyers, Phillip A.)

-- Shoreline processes and geomorphology, southwestern Lake Michigan (Field trip 6) (Collinson, Charles)

marine environment: Aux Vases-Renault-Yankeetown depositional sequence in comparison to other

- Chesterian depositional sequences (Jennings, James R.)
- Enrichment of trace metals and organic carbon in shales of the New Albany Group (Frost, J. K.)
- Geostatistical analysis of the facies and thickness variation in the Brereton Limestone and the Anna Shale in part of southwestern Illinois (Cleaveland, Thomas H.)
- Non-marine and marine influenced Herrin Coal and associated roof shales from southern Illinois; a mineralogical and statistical analysis (Stutzman, Paul E.)
- The occurrence and distribution of mineral matter in coal lithotypes in the Herrin (No. 6) Coal seam under marine and nonmarine influences (Baumann, Dean R.)
- nearshore environment:**
 - Depositional and diagenetic environments of carbonate-siliciclastic rocks of the Glen Dean Formation (Upper Mississippian), Illinois Basin, U.S.A. (Feiznia, Sadat)
 - Drowned barrier bar and tidal inlet sequences in Buckner-Sesser-Valier fields, Franklin County, Illinois (Young, Victor R.)
 - Facies and depositional environments of Energy Shale Member (Carbondale Formation, Pennsylvanian), southwestern Jefferson County, Illinois (Burk, Mitchell Keith)
 - Facies and depositional environments of the Energy Shale (Pennsylvanian) in southwestern Jefferson County, Illinois (Burk, Mitchell Keith)
 - Paleoecology and environments of deposition of the Brereton Limestone Member (Pennsylvanian, Desmoinesian) in southwestern Illinois (O'Connell, Dennis B.)
 - Petrographic investigation and examination of the thickness of the Brereton Limestone (Middle Pennsylvanian)) in a

- portion of the Illinois Basin (Guzan, Michael John)
- paludal environment:** Origin and economic geology of the Springfield Coal Member in the Illinois Basin (Field trip 9) (Eggert, D. L.)
- reefs:** Silurian reef and interreef strata as responses to a cyclical succession of environments, southern Great Lakes area (Field trip 12) (Shaver, Robert H.)
- shallow-water environment:** A petrographic study of the Backbone (Little Saline) Limestone (Lower Devonian) in southwestern Illinois and southeastern Missouri (Lange, Rolf V.)
- Biofacies and habitats of Brereton Limestone Member (Carbondale Formation, Middle Pennsylvanian), southwestern Illinois (D'Connell, Dennis B.)
- shelf environment:** Dolitic strata of the Keel Formation and Edgewood Group (Late Ordovician and Early Silurian), Texas Panhandle to the Mississippi Valley (Amsden, Thomas W.)
- sedimentation--processes**
- fluvial sedimentation:** Vertical and horizontal stability of streams in northern Illinois (Vagt, Peter J.)
- glacial sedimentation:** Importance of the regelation process to certain properties of basal tills deposited by the Laurentide ice sheet in Iowa and Illinois, U.S.A. (Kemmis, T. J.)
- transgression:** Aggraded fluvial and tide-dominated deltaic deposits of the Spoon Formation (Pennsylvanian) in the southern Illinois Basin; a shallow embayment (Ambrose, William Anthony)
- sedimentation--provenance**
- sandstone:** Stratigraphic traps and deposition of Aux Vases and uppermost Ste. Genevieve formations (Mississippian), southern Illinois (Seyler, Beverly J.)

- sedimentation--sedimentation rates**
- indicators:** Lithium silicate sedimentation tracer for shoal deposit studies (Nedved, T. K.)
- Sediment deposition estimation from cesium-137 measurements (Mitchell, J. Kent)
- lacustrine sedimentation:** Deposition of bottom sediment in Lake Ellyn, Glen Ellyn, Illinois (Cowan, Ellen Anne)
- sedimentation--transport**
- glacial transport:** Late Cretaceous marine foraminifers from Pleistocene fluvilacustrine deposits in eastern Missouri (Thompson, Thomas L.)
- stream transport:** Measurement of bedload discharge in nine Illinois streams with the Helleys-Smith sampler (Graf, J. B.)
- Runoff and sediment transport from an agricultural watershed in northern Illinois (Allen, H. E., Jr.)
- Runoff, sediment transport, and water quality in a northern Illinois agricultural watershed before urban development 1979-81 (Allen, Howard E., Jr.)
- Sediment sources of Midwestern surface waters (Wilkin, Donovan C.)
- sediments see also sedimentary rocks; sedimentary structures; sedimentation**
- sediments--clastic sediments**
- clay:** The late Wisconsinan Savanna Terrace in tributaries to the upper Mississippi River (Flock, Mark A.)
- composition:** Deposition of bottom sediment in Lake Ellyn, Glen Ellyn, Illinois (Cowan, Ellen Anne)
- deposition:** Geologic history of the Mackinaw Member of the Henry Formation in the Illinois River valley in Tazewell County, Illinois (Searight, Thomas K.)
- diamictite:** Sedimentological interpretation of the Belgium Member, Banner Formation, eastern Illinois (Johnson, W.

Hilton)
drift: Low-level radioactive-waste burial at the Palos Forest Preserve; Illinois; geology and hydrology of the glacial drift, as related to the migration of tritium (Olimpio, J. C.)
lithostratigraphy: Stratigraphic reassignment of the Hagarstown Member in Illinois (Killey, Myrna M.)
loess: Clay minerals in thin loess, Ohio River basin, U.S.A. (Ruhe, Robert V.)
-- Loess stratigraphy, distribution, and time of deposition in Illinois (Fehrenbacher, J. B.)
Paleosols: Stratigraphy of the Wedron and Trafalgar formations (Wisconsinan) in east-central Illinois and west-central Indiana (Field trip 3) (Kempton, John P.)
till: Importance of the regulation process to certain properties of basal tills deposited by the Laurentide ice sheet in Iowa and Illinois, U.S.A. (Kemmis, T. J.)
-- Lithofacies in the Batestown Till Member, Wedron Formation at two sites in eastern Illinois (von Rhee, Robert W.)
sediments--environmental analysis
sediment yield: Long-term sediment yields from Bay Creek, Pike County, Illinois (Lazaro, T. R.)
sediments--geochemistry
metals: Chemistry of bottom sediments from the Cal-Sag Channel and the Des Plaines and Illinois rivers between Joliet and Havana, Illinois (Harrison, W.)
-- Selected metals in river sediment, water, and animals (Mathis, B. J.)
organic materials: Environmental fates of polychlorinated dioxins and furans as determined from sediment cores (Czuczwa, Jean M.)
-- Organic matter alterations during sinking of sediment particles in Lake Michigan (Meyers, Philip A.)

sediments--lithostratigraphy
Quaternary: The distribution of the Piatt Till Member of the Wedron Formation in Coles County, Illinois (Hardesty, Alan F.)
seismic methods see under geophysical methods
seismic surveys see under geophysical surveys; see under Mississippi Valley
seismology see also engineering geology
seismology--microearthquakes
epicenters: Revised hypocenters and correlation of seismicity and tectonics in the Central United States (Gordon, David Walker)
seismology--seismicity
seismic zoning: Central Interior seismic source zones; summary of workshop convened June 10-11, 1980 (McKeown, F. A.)
shorelines see also under engineering geology under Great Lakes region
Silurian see also under stratigraphy
slope stability see also engineering geology; geomorphology
soil mechanics see also rock mechanics
soil mechanics--applications
land use: Stratigraphy and land-use applications; a case study in surficial geologic mapping of Madison County, Illinois (Killey, Myrna M.)
soil mechanics--liquefaction
liquefaction potential: Liquefaction potential in the central Mississippi Valley (Obermeier, Stephen F.)
soils
maps: Soil survey of Bond County, Illinois (Phillips, Donald B.)
pedogenesis: Loess stratigraphy, distribution, and time of deposition in Illinois (Fehrenbacher, J. B.)
-- The origin and early genesis of clay bands in youthful sandy soils along Lake Michigan, U.S.A. (Berg, Richard C.)
soil erosion: Erosion characteristics of surface-mined soils (Mostaghimi, Saied)

soils--surveys
Analysis of soil cores beneath radioactive-waste-disposal site, Sheffield, Illinois (Healy, R. W.)
-- Erosion characteristics of surface-mined soils (Mostaghimi, Saied)
-- Erosion model for reclamation areas (Vipulanandan, Cumaraswamy)
-- Evaluation of soil tests as a measure of phosphorus and potassium availability in Illinois coal waste (Lewis, B. G.)
-- Identifying buried Indian mounds and geomorphic surfaces near Cahokia, Illinois (Barnhardt, Michael L.)
-- Loess stratigraphy, distribution, and time of deposition in Illinois (Fehrenbacher, J. B.)
-- Moisture characteristics of compacted soils for use in trench covers (Klein, S.)
-- Soil survey of Bond County, Illinois (Phillips, Donald B.)
-- Surficial geology of Kendall County, Illinois (Brossman, James J.)
-- The origin and early genesis of clay bands in youthful sandy soils along Lake Michigan, U.S.A. (Berg, Richard C.)
-- Variations in hydrologic soil properties caused by mining activities (Chong, She-Kong)
Midwest: Clay minerals in thin loess, Ohio River basin, U.S.A. (Ruhe, Robert V.)
-- Soil erosion in the Corn Belt; problems and solutions (Fenton, Thomas E.)
Mississippi Valley: The late Wisconsinan Savanna Terrace in tributaries to the upper Mississippi River (Flock, Mark A.)
solution features see under geomorphology
springs see also ground water stratigraphy
archaeology: Accelerator radiocarbon dating of evidence for prehistoric horticulture in Illinois (Conard, Nicholas)
-- An evaluation of postdepositional changes

in the trace element content of human bone (Nelson, Dorothy A.)

-- Identifying buried Indian mounds and geomorphic surfaces near Cahokia, Illinois (Barnhardt, Michael L.)

Cambrian: The petrology and petrography of the Mt. Simon and pre-Mt. Simon sandstones; evidence for possible Precambrian rifting in the central Midcontinent (Kersting, Joseph Jeffrey)

Carboniferous: Comparison of miospore assemblages in the Pennsylvanian System of the Illinois Basin with those in the Upper Carboniferous of Western Europe (Peppers, Russell A.)

-- Fabric of the clastic component of Carboniferous concretions and their enclosing matrix (Woodland, Bertram G.)

-- Multielement conodont species and ecological interpretation of the lower Dsagean (Lower Carboniferous) conodont zonation from Midcontinent North America (Chaff, Karl M.)

-- Trace and minor element analyses of the Hymera Coal Member of Indiana (Coal VI) (Heberton, Richard P.)

changes of level: Late Holocene beach ridges and water level cycles in Lake Michigan (Collinson, Charles)

Devonian: Facies, formation boundaries, and chronostratigraphy in the upper part of the New Albany Shale Group (Devonian-Mississippian) in the Illinois Basin (Reinbold, Mark L.)

-- Internal stratigraphy of Devonian Tioga Ash beds in Appalachian Valley and Ridge Province (Dennison, John M.)

-- Topography and geology of the Early Pennsylvanian erosional surface on the northwest margin of the Illinois Basin, USA (Leary, Richard L.)

Mississippian: Aux Vases-Renault-Yankeetown depositional sequence in comparison to other Chesterian depositional sequences (Jennings, James R.)

-- Crinoid arenite banks and crinoid wacke inertia flows; a depositional model for the Burlington Limestone (Middle Mississippian), Illinois, Iowa, and Missouri, USA (Carozzi, Albert V.)

-- Distribution of fossil plant taxa in the Upper Mississippian and Lower Pennsylvanian Illinois Basin (Jennings, James R.)

-- Facies, formation boundaries, and chronostratigraphy in the upper part of the New Albany Shale Group (Devonian-Mississippian) in the Illinois Basin (Reinbold, Mark L.)

-- Middle Chesterian (Golconda) marine deltaic paleocommunities from the Illinois Basin (Kelly, Stuart M.)

-- Mississippian stratotype; an overview (Thompson, Thomas L.)

-- Paleontology and stratigraphy of strata associated with the basal Chesterian in its type region (Jennings, James R.)

-- Petrology, paleoecology, and depositional environments of a micritic limestone in Cave Hill Member of Kinkaid Formation (Mississippian, Chesterian), southern Illinois (Hakkio, Lisa B.)

-- Spores from Chesterian coals of the Illinois Basin (Kosanke, Robert M.)

-- Stratigraphic traps and deposition of Aux Vases and uppermost Ste. Genevieve formations (Mississippian), southern Illinois (Seyler, Beverly J.)

-- The Mississippian-Pennsylvanian boundary in the southern Midcontinent, United States (Manger, Walter L.)

-- The paleoecology of malacostracean arthropods in the Bear Gulch Limestone (Namurian) of central Montana (Factor, David F.)

Ordovician: Brainard Shale outliers (Upper Drdovician, Maquoketa Group) in southeastern Indiana (Fluegeman, Richard H., Jr.)

-- Depositional environments of the St. Peter Sandstone of the Upper Midwest (Winfree, K. E.)

-- Lithostratigraphy and depositional environments of the Moquoketa Group (Drdovician) in northern Illinois (Kolata, Dennis R.)

-- Maquoketa Shale Group of northern Illinois (Kolata, Dennis R.)

-- Oolites at the Ordovician-Silurian boundary in Illinois (Kluessendorf, Joanne)

-- Dolitic strata of the Keel Formation and Edgewood Group (Late Ordovician and Early Silurian), Texas Panhandle to the Mississippi Valley (Amsden, Thomas W.)

Paleocene: The stratigraphic position of Paleocene foraminifera from Kentucky and Illinois (Fluegeman, Richard H., Jr.)

Paleozoic: Seismic velocities of lower Paleozoic stratigraphic units in Stephenson County, Illinois (Wang, H. F.)

Pennsylvanian: A gravitational slide in the Energy Shale Member overlying the Herrin (No. 6) Coal Member in southern Illinois (Nelson, W. John)

-- Biofacies and habitats of Brereton Limestone Member (Carbondale Formation, Middle Pennsylvanian), southwestern Illinois (O'Connell, Dennis B.)

-- Breezy Hill Limestone, a prelude to the major widespread Pennsylvanian cyclothsems of Midcontinent North America (Knight, Kimbell L.)

-- Changing concepts of Midcontinent Pennsylvanian cyclothsems, North America (Heckel, Philip H.)

-- Classification of clastic sediments in Pennsylvanian coal-bearing formations emphasizing mudrock lithology (Chen, Pei-Yuan)

- Comparison of miospore assemblages in the Pennsylvanian System of the Illinois Basin with those in the Upper Carboniferous of Western Europe (Peppers, Russell A.)
- Detailed biostratigraphic correlation, Shumway "Cyclothem", Virgilian, Illinois Basin (Langenheim, Ralph L., Jr.)
- Distribution of fossil plant taxa in the Upper Mississippian and Lower Pennsylvanian Illinois Basin (Jennings, James R.)
- Facies and depositional environments of the Energy Shale (Pennsylvanian) in southwestern Jefferson County, Illinois (Burk, Mitchell Keith)
- Geostatistical analysis of the facies and thickness variation in the Brereton Limestone and the Anna Shale in part of southwestern Illinois (Cleaveland, Thomas H.)
- Paleoecology and environments of deposition of the Brereton Limestone Member (Pennsylvanian, Desmoinesian) in southwestern Illinois (O'Connell, Dennis B.)
- Paleoecology of an estuarine-deltaic biota; community-habitat mosaic of the Pennsylvanian Mazon Creek fauna in Northeast Illinois (Baird, Gordon C.)
- Passage-time characteristics of Pennsylvanian sequences in Illinois (Doveton, John H.)
- Petrographic investigation and examination of the thickness of the Brereton Limestone (Middle Pennsylvanian) in a portion of the Illinois Basin (Guzan, Michael John)
- Revised correlations of the Shoal Creek and La Salle limestone members of the Bond Formation (Pennsylvanian) in northern Illinois (Jacobson, Russell J.)
- Revision of nomenclature for the Springfield (No.
- 5) Coal Member of Illinois (Trask, C. Brian)
- Stratigraphic correlations of Seelyville, De Koven, and Davis coals (Desmoinesian) of Illinois Basin coalfield (Jacobson, Russell J.)
- The Mississippian-Pennsylvanian boundary in the southern Midcontinent, United States (Manger, Walter L.)
- The Turner Mine Shale Member; a newly named stratigraphic unit of the Carbondale Formation (Nelson, W. John)
- Topography and geology of the Early Pennsylvanian erosional surface on the northwest margin of the Illinois Basin, USA (Leary, Richard L.)
- Pleistocene: A plant macrofossil assemblage from Illinoian glacial till in Jackson County, Illinois (Jackson, Stephen T.)
- Geologic history of the Mackinaw Member of the Henry Formation in the Illinois River valley in Tazewell County, Illinois (Searight, Thomas K.)
- Late Cretaceous marine foraminifers from Pleistocene fluviolacustrine deposits in eastern Missouri (Thompson, Thomas L.)
- Lithofacies in the Batestown Till Member, Wedron Formation at two sites in eastern Illinois (von Rhee, Robert W.)
- Sedimentological interpretation of the Belgium Member, Banner Formation, eastern Illinois (Johnson, W. Hilton)
- Stratigraphic reassignment of the Hagarstown Member in Illinois (Killey, Myrna M.)
- The Pleistocene stratigraphy and geomorphology of central-southern Wisconsin and part of northern Illinois (Fricke, Carl A. P.)
- The Tiskilwa Till, a regional view of its origin and depositional processes (Wickham, Susan Specht)
- The Wadsworth Till Member of Illinois and the equivalent Oak Creek Formation of Wisconsin (Hansel, Ardith K.)
- Precambrian: The petrology and petrography of the Mt. Simon and pre-Mt. Simon sandstones; evidence for possible Precambrian rifting in the central Midcontinent (Kersting, Joseph Jeffrey)
- Proterozoic: The Baraboo Interval; a tale of red quartzites (Dott, R. H., Jr.)
- Quaternary: Evidence for stagnant ice in the Chain O'Lakes Lowland during deposition of Haeger and Wadsworth till (Hansel, Ardith K.)
- Late-glacial and postglacial pollen studies from the Zuehl Farm site, north-central Iowa and the Cattail Channel Bog, northwestern Illinois (Kim, Hyung Keun)
- Stratigraphy of the Wedron and Trafalgar formations (Wisconsinan) in east-central Illinois and west-central Indiana (Field trip 3) (Kempton, John P.)
- Surficial geology of Kendall County, Illinois (Brossman, James J.)
- The distribution of the Piatt Till Member of the Wedron Formation in Coles County, Illinois (Hardesty, Alan F.)
- The late Wisconsinan Savanna Terrace in tributaries to the upper Mississippi River (Flock, Mark A.)
- Silurian: Oolites at the Ordovician-Silurian boundary in Illinois (Kluessendorf, Joanne)
- Oolitic strata of the Keel Formation and Edgewood Group (Late Ordovician and Early Silurian), Texas Panhandle to the Mississippi Valley (Amsden, Thomas W.)
- Silurian reef and interreef strata as responses to a cyclical succession of environments, southern Great Lakes area (Field trip 12) (Shaver, Robert

H.)

strontium--geochemistry

granites: Trace element geochemistry of Precambrian granite from northern Illinois Deep Drill Hole UPH-3 (Schulz, Klaus J.)

strontium--isotopes

Sr-87/Sr-86: The strontium isotope and rare-earth element systematics of nonsulfide minerals from the Illinois-Kentucky fluorspar district (Dickhaut, Lisa A.)

structural geology

deformation: Microcrack study of granitic cores from Illinois deep borehole UPH 3 (Kowallis, Bart J.)

-- State of stress, permeability, and fractures in the Precambrian granite of northern Illinois (Haimson, Bezalel C.)

faults: Strike-slip fault in flat-lying strata of Macoupin County, Illinois (Nelson, W. John)

tectonics: A comparison of linear features mapped from digitally processed Landsat data to faults depicted on geologic maps; the fluorspar district, western Kentucky and southern Illinois (Shelby, Lynn)

-- A gravitational slide in the Energy Shale Member overlying the Herrin (No. 6) Coal Member in southern Illinois (Nelson, W. John)

-- Continental rifting under the Illinois Basin and Mississippi River embayment (Pinckney, Darrell M.)

-- History of displacement along Ste. Genevieve fault zone, southwestern Illinois (Schwalb, Howard R.)

-- New Burnside "anticline"; part of fluorspar area fault complex? (Jacobson, Russell J.)

-- Shallow seismic refraction survey, Gallatin County, Illinois (Roman, Juan A. Deliz)

-- Structural geology of Shawneetown fault zone, southeastern Illinois (Lumm, Donald K.)

-- Structural history of southern Illinois and upper Mississippi Embayment (Schwalb, Howard R.)

-- Structural relationships between Cottage Grove and Shawneetown fault systems, southeastern Illinois, as inferred from gravity data (Strunk, Kevin L.)

-- Tectonic faults and their influence on coal mining in Illinois (Nelson, W. John)

-- Tectonic history of southeastern Illinois (Nelson, W. John)

-- Thermal contraction and flexure of intracratonal basins; a three-dimensional study of the Michigan Basin (Nunn, Jeffrey A.)

sulfides see under minerals

sulfur--geochemistry

black shale: Physical and chemical characterization of Devonian gas shale; quarterly status report October 1, 1980-December 31, 1980 (Zielinski, R. E.)

coal: Geochemistry of trace elements and sulfur in the Springfield (No. 5) Coal in the Illinois Basin (Chou, C. L.)

-- Origin and economic geology of the Springfield Coal Member in the Illinois Basin (Field trip 9) (Eggert, D. L.)

-- Variations in the forms and occurrences of sulfur in the Herrin No. 6 coal seam in southern Illinois (Crelling, John C.)

sulfur--isotopes

S-34/S-32: A burial diagenetic model for the emplacement of zinc-lead sulfide ores in the Upper Mississippi Valley, USA (Ludvigson, Gregory A.)

-- High-Zn-coals of Illinois; coal-hosted mississippi valley-type mineralization? (Whelan, Joseph F.)

-- Stable isotope evidence for the origin of sulfur in coal (Westgate, Linda M.)

-- Sulfur isotopic fractionation in the formation of pyrite from Upper Devonian black shales (Anderson, Thomas F.)

sulphur see sulfur

symposia--engineering geology

earthquakes: Central Interior seismic source zones; summary of workshop convened June 10-11, 1980 (McKeown, F. A.)

techniques see under environmental geology; hydrology

tectonics see also faults; structural geology; see also under structural geology under Midwest; Mississippi Valley

terraces see under fluvial features under geomorphology; see under lacustrine features under geomorphology

thorium--geochemistry

granites: Trace element geochemistry of Precambrian granite from northern Illinois Deep Drill Hole UPH-3 (Schulz, Klaus J.)

-- Uranium-series disequilibrium in granite from core samples of drill hole UPH-3, Stephenson County, Illinois (Rosholt, J. N.)

thorium--isotopes

Th-230: Isotopic composition of uranium and thorium in crystalline rocks (Rosholt, J. N.)

-- Uranium-series disequilibrium in granite from core samples of drill hole UPH-3, Stephenson County, Illinois (Rosholt, J. N.)

Th-232/Th-230: Isotopic composition of uranium and thorium in crystalline rocks (Rosholt, John N.)

trace elements see under geochemistry; see under biochemistry under fossil man; see under chemical weathering under weathering; see under geochemistry under coal; sedimentary rocks; see under granites under igneous rocks

tree rings see under geochronology

trilobites--paleoecology

Pennsylvanian: Paleoecology and environments of deposition of the Brereton Limestone Member (Pennsylvanian, Desmoinesian) in southwestern Illinois (O'Connell, Dennis B.)

Silurian: Silurian reef and interreef strata as

responses to a cyclical succession of environments, southern Great Lakes area (Field trip 12) (Shaver, Robert H.)

tritium see also deuterium; hydrogen

tritium--geochemistry

ground water: Hydrogeologic controls on the extent and rate of tritium migration from a low-level radioactive waste disposal facility near Sheffield, Illinois (Foster, J. B.)

-- Low-level radioactive-waste burial at the Palos Forest Preserve, Illinois; geology and hydrology of the glacial drift, as related to the migration of tritium (Olimpio, J. C.)

unconformities see under lithostratigraphy under sedimentary rocks

underground installations see also under engineering geology

underground water see ground water

United States see also Eastern U.S.; Midwest

United States--economic geology

coal: The occurrence and distribution of mineral matter in coal lithotypes in the Herrin (No. 6) Coal seam under marine and nonmarine influences (Baumann, Dean R.)

oil shale: The outlook for shale oil (Culberson, S. Frank)

water resources: Editorial; Making peace with Mother Nature (Lehr, Jay H.)

United States--engineering geology

foundations: Reactor site reviews (Morris, R. H.)

nuclear facilities: Reactor site reviews (Morris, R. H.)

United States--environmental geology

reclamation: Editorial; Making peace with Mother Nature (Lehr, Jay H.)

United States--geomorphology

fluvial features: Hydraulic geometry of floodplains (Bhawmik, Nani G.)

United States--paleobotany

pteridophytes: *Parlycopodites* Morey & Morey, from the Carboniferous of Euramerica; a reassessment of generic affinities and evolution of-- "tepidodendron" *brevifolium* Williamson (DiMichele, William A.)

uranium--geochemistry

black shale: Physical and chemical characterization of Devonian gas shale; quarterly status report October 1, 1980-December 31, 1980 (Zielinski, R. E.)

granites: Trace element geochemistry of Precambrian granite from northern Illinois Deep Drill Hole UPH-3 (Schulz, Klaus J.)

uranium--isotopes

trans-uranium elements: Uranium-series disequilibrium in granite from core samples of drill hole UPH-3, Stephenson County, Illinois (Rosholt, J. N.)

U-238/U-234: Isotopic composition of uranium and thorium in crystalline rocks (Rosholt, J. N.)

-- Isotopic composition of uranium and thorium in crystalline rocks (Rosholt, John N.)

vanadium--geochemistry

black shale: Physical and chemical characterization of Devonian gas shale; quarterly status report October 1, 1980-December 31, 1980 (Zielinski, R. E.)

varves see lacustrine features under geomorphology

Vertebrata see also fossil man; Mammalia; problematic fossils

Vertebrata--miscellanea

collecting: Fossils (King, James E.)

waste disposal see also under engineering geology; environmental geology

waste disposal--radioactive waste

low-level waste: Methods for disposing of low-level radioactive waste in the ground (Daniel, David E.)

water see also ground water; hydrogeology; hydrology; water resources

water resources see also under economic geology; see also under economic geology under United States

water resources--resources

ground water: Biologically mediated chemical changes in the filtration of aerated ground waters (Baliga, K. Y.)

waterways see also under engineering geology

waterways--rivers and streams

hydraulics: Hydraulic geometry of floodplains (Bhawmik, Nani G.)

weathering--chemical weathering

trace elements: Uranium-series disequilibrium in granite from core samples of drill hole UPH-3, Stephenson County, Illinois (Rosholt, J. N.)

well-logging see also geophysical surveys

well-logging--acoustical logging

boreholes: Seismic velocities of lower Paleozoic stratigraphic units in Stephenson County, Illinois (Wang, H. F.)

well-logging--electrical logging

reservoir rocks: Drowned barrier bar and tidal inlet sequences in Buckner-Sesser-Valier fields, Franklin County, Illinois (Young, Victor R.)

well-logging--electromagnetic logging

instruments: Litho-Density log applications in the Michigan and Illinois basins (McCall, D. C.)

well-logging--interpretation

basement: Illinois Deep Hole Project (Anonymous)

-- Introduction to the Illinois Deep Hole Project (Coates, M. S.)

boreholes: Challenging Northeast formations examined (Maslowski, Andy)

granites: Interpretation of core and well log physical property data from drill hole UPH-3, Stephenson County, Illinois (Daniels, Jeffrey J.)

lithostratigraphy: Petrographic investigation and examination of the thickness of the Brereton Limestone (Middle Pennsylvanian)) in a portion of the Illinois Basin (Guzan, Michael John)

physical properties:

Interpretation of core and
well log physical
properties data from drill
hole UPH-3, Stephenson
County, Illinois (Daniels,
Jeffrey J.)

Western Hemisphere see also

North America

zinc--geochemistry

bones: An evaluation of
postdepositional changes
in the trace element
content of human bone
(Nelson, Dorothy A.)

coal: High-Zn-coals of
Illinois; coal-hosted
mississippi valley-type
mineralization? (Whelan,
Joseph F.)

BIBLIOGRAPHY AND INDEX OF ILLINOIS GEOLOGY

COUNTY INDEX

Adams County

Bigelow, Tom. Fault, uplift discovered in Adams County
Conard, Nicholas. Accelerator radiocarbon dating of evidence for prehistoric horticulture in Illinois
Maslowski, Andy. Green pastures in Brown County

Alexander County

Lee, Michael R. Wood patterns in an Upper Cretaceous flora from southern Illinois

Bond County

Phillips, Donald B. Soil survey of Bond County, Illinois

Boone County

Allen, Howard E., Jr. Runoff, sediment transport, and water quality in a northern Illinois agricultural watershed before urban development 1979-81
Berg, Richard C. A guide to the geology of the Capron-Rockford area

Brown County

Anonymous. Illinois; Buckhorn East most exciting play
Leary, Richard L. Topography and geology of the Early Pennsylvanian erosional surface on the northwest margin of the Illinois Basin, USA
Maslowski, Andy. Green pastures in Brown County

Bureau County

Foster, J. B. Hydrogeologic controls on the extent and rate of tritium migration from a low-level radioactive waste disposal facility near Sheffield, Illinois
Gray, John R. A system for measuring surface runoff and collecting sediment samples from small areas
McCray, J. G. Low-level

nuclear waste shallow land burial trench isolation; annual report; October 1982 - September 1983

Calhoun County

Conard, Nicholas. Accelerator radiocarbon dating of evidence for prehistoric horticulture in Illinois

Cass County

Stamer, J. K. Work plan for the Sangamon River basin, Illinois

Christian County

Stamer, J. K. Work plan for the Sangamon River basin, Illinois

Coles County

Hardesty, Alan F. The distribution of the Piatt Till Member of the Wedron Formation in Coles County, Illinois

Cook County

Collinson, Charles. Shoreline processes and geomorphology, southwestern Lake Michigan (Field trip 6)

Cowan, Ellen Anne. Deposition of bottom sediment in Lake Ellyn, Glen Ellyn, Illinois

Kukalova-Peck, Jarmila. New Homoptera (Insecta: Paleoictyoptera) with wing articulation from Upper Carboniferous strata of Mazon Creek, Illinois

Olimpio, J. C. Low-level radioactive-waste burial at the Palos Forest Preserve, Illinois; geology and hydrology of the glacial drift, as related to the migration of tritium

Crawford County

Howell, James C. Evaluation of injection well stimulation as applied to a large micellar/polymer project

De Witt County

Klein, S. Moisture characteristics of compacted soils for use in trench covers

Stamer, J. K. Work plan for the Sangamon River basin, Illinois

Effingham County

Barber, A. H., Jr. Infill drilling to increase reserves; actual experience in nine fields in Texas, Oklahoma, and Illinois

Fayette County

Barber, A. H., Jr. Infill drilling to increase reserves; actual experience in nine fields in Texas, Oklahoma, and Illinois

Franklin County

Demaris, Philip J. Geology of the Herrin (No. 6) coal and associated strata at Old Ben No. 24, Franklin County, Illinois

DeMaris, Philip J. Coal-ball formation in the Herrin Coal, Franklin County, Illinois

Lizak, John B. Geologic structures and horizontal stresses; their impact on petroleum and coal production in Illinois Basin

Miller, John J. Detection of potential inundation hazards by overwater seismic methods

Sutherland, H. J. Prediction of subsidence using complementary influence functions

Young, Victor R. Drowned barrier bar and tidal inlet sequences in Buckner-Sesser-Valier fields, Franklin County, Illinois

Fulton County

Hoppe, W. J. Age and significance of Precambrian basement samples from northern Illinois and adjacent states
Peters, C. A. Mine-reclamation hydrology in Fulton County, Illinois

Gallatin County

DiMichele, William A. *Paralycopodites Morey & Morey*, from the Carboniferous of Euramerica; a reassessment of generic affinities and evolution of "Lepidodendron" brevifolium Williamson
Lumm, Donald K. Structural geology of Shawneetown fault zone, southeastern Illinois
Roman, Juan A. Deliz. Shallow seismic refraction survey, Gallatin County, Illinois
Strunk, Kevin L. Structural relationships between Cottage Grove and Shawneetown fault systems, southeastern Illinois, as inferred from gravity data

Greene County

Conard, Nicholas. Accelerator radiocarbon dating of evidence for prehistoric horticulture in Illinois
Maslowski, Andy. Focus deepens in Illinois; Silurian reef search on the horizon

Grundy County

Konecny, Jim. The Mazon Creek nodules

Hancock County

Maslowski, Andy. Green pastures in Brown County

Hardin County

Brecke, E. A. A supplemental report on the Cave In Rock fluorspar district, Hardin County, Illinois
Pittman, Jon T. Honeycomb calcite and other Ohio Valley delights
Reinertsen, David L. A guide to the geology of the Cave in Rock-Rosiclare area
Watts, Alice Marie. Fluorite, the magical mineral

Henry County

Hoppe, W. J. Age and significance of Precambrian basement samples from northern Illinois and adjacent states
Leary, Richard L. Topography

and geology of the Early Pennsylvanian erosional surface on the northwest margin of the Illinois Basin, USA

van Schmus, W. R. Age and geologic significance of Precambrian basement samples from northern Illinois and eastern Iowa

Jackson County

Hoppe, W. J. Age and significance of Precambrian basement samples from northern Illinois and adjacent states
Jackson, Stephen T. A plant macrofossil assemblage from Illinoian glacial till in Jackson County, Illinois
Schwalb, Howard R. History of displacement along Ste. Genevieve fault zone, southwestern Illinois

Jefferson County

Burk, Mitchell Keith. Facies and depositional environments of the Energy Shale (Pennsylvanian) in southwestern Jefferson County, Illinois
Burk, Mitchell Keith. Facies and depositional environments of Energy Shale Member (Carbondale Formation, Pennsylvanian), southwestern Jefferson County, Illinois
Miller, John J. Detection of potential inundation hazards by overwater seismic methods

Johnson County

Hakkio, Lisa B. Petrology, paleoecology, and depositional environments of a micritic limestone in Cave Hill Member of Kinkaid Formation (Mississippian, Chesterian), southern Illinois

Jennings, James R. The morphology and relationships of *Rhodea*, *Telangium*, *Telangiopsis*, and *Heterangium*

Kendall County

Brossman, James J. Surficial geology of Kendall County, Illinois

Knox County

DiMichele, William A. *Paralycopodites Morey & Morey*, from the Carboniferous of Euramerica; a reassessment of generic

affinities and evolution of "Lepidodendron" brevifolium Williamson

Merrill, Glen K. Trace fossils within limestone interbeds, Oak Grove Member, Carbondale Formation (Pennsylvanian, Desmoinesian), northwestern Illinois

La Salle County

Heidari, Manoutchehr. Analysis of rock stress around a liquid waste injection system in Illinois

Lake County

Berg, Richard C. The origin and early genesis of clay bands in youthful sandy soils along Lake Michigan, U.S.A.

Collinson, Charles. Late Holocene beach ridges and water level cycles in Lake Michigan

Collinson, Charles. Shoreline processes and geomorphology, southwestern Lake Michigan (Field trip 6)

Lawrence County

Shadle, Gary L. The frond of *Heterangium*
Stidd, Benton M. The synangiate nature of *Dolerotheca*

Livingston County

Pittman, Jon T. Honeycomb calcite and other Ohio Valley delights

Logan County

Stamer, J. K. Work plan for the Sangamon River basin, Illinois

Macon County

Stamer, J. K. Work plan for the Sangamon River basin, Illinois

Macoupin County

DeMaris, Philip J. An erosional channel in the roof of the Illinois Herrin (No.6) coal; implications for exploration

Johnson, Thomas M. Hydrologic investigations of failure mechanisms and migration of organic chemicals at Wilsonville, Illinois

Lewis, B. G. Evaluation of soil tests as a measure of phosphorus and potassium availability in Illinois coal waste

Miller, Halsey W. Petroleum

geology of Macoupin County, Illinois
 Nelson, W. John. Tectonic faults and their influence on coal mining in Illinois
 Nelson, W. John. Strike-slip fault in flat-lying strata of Macoupin County, Illinois
 Vipulanandan, Cumaraswamy. Erosion model for reclamation areas
 Vipulanandan, Cumaraswamy. Quality of runoff water from soil-covered reclamation sites

Madison County
 Hoppe, W. J. Age and significance of Precambrian basement samples from northern Illinois and adjacent states
 Kille, Myrna M. Stratigraphy and land-use applications; a case study in surficial geologic mapping of Madison County, Illinois
 Tirey, G. B. Common-depth-point seismic-reflection survey on the Mississippi River in the vicinity of Alton, Illinois
 Winget, E. A. U.S. Geological Survey common-depth-point seismic-reflection survey between Mississippi River miles 195 and 210 (R/V Neecho, cruise NE-80-3)

Marion County
 Dahl, H. M. Geologic factors influencing reservoir performance at Texaco's Salem Tertiary recovery project, Marion County, Illinois

McDonough County
 Maslowski, Andy. Green pastures in Brown County

McLean County
 Heidari, Manoutchehr. Analysis of rock stress around a liquid waste injection system in Illinois
 Reinertsen, David L. A guide to the geology of the Danvers-Normal area

Menard County
 Stamer, J. K. Work plan for the Sangamon River basin, Illinois

Monroe County
 Frasz, Geoffrey B. Mastodon bones in an Illinois cave
 Jaeger, Paul. The effects of depositional environment and diagenesis on the porosity and permeability in the Salem Limestone in Union and Monroe counties, southern Illinois

Perry County
 DiMichele, William A. Paracopodites Morey & Morey, from the Carboniferous of Euramerica; a reassessment of generic affinities and evolution of "Lepidodendron" brevifolium Williamson

Oertel, Allen O. Changes in ground water quality associated with cast overburden material in Southwest Perry County, Illinois

Piatt County
 Mitchell, J. Kent. Sediment deposition estimation from cesium-137 measurements
 Stamer, J. K. Work plan for the Sangamon River basin, Illinois

Pike County
 Allen, Robert D. Confined aquifers as reservoirs for compressed air
 Conard, Nicholas. Accelerator radiocarbon dating of evidence for prehistoric horticulture in Illinois
 Lazaro, T. R. Long-term sediment yields from Bay Creek, Pike County, Illinois
 Lazaro, Timothy R. Estimates of long-term suspended-sediment loads in Bay Creek at Nebo, Pike County, Illinois, 1940-1980
 Maliva, Robert G. Ophiocistoid (?) ossicles from the McCraney Limestone (Lower Mississippian) of western Illinois
 Maslowski, Andy. Green pastures in Brown County

Pope County
 Klasner, J. S. Geologic map of the Burden Falls Roadless Area, Pope County, Illinois
 Klasner, J. S. Mineral resource potential map of the Burden Falls Roadless Area, Pope County, Illinois
 Klasner, J. S. Mineral resource potential map of the Lusk Creek Roadless Area, Pope County, Illinois
 Klasner, John S. Burden Falls Roadless Area, Illinois
 Klasner, John S. Lusk Creek Roadless Area, Illinois

Lumm, Donald K. Structural geology of Shawneetown fault zone, southeastern Illinois
 Reinertsen, David L. A guide to the geology of the Golconda area

Pulaski County
 Hoppe, W. J. Age and significance of Precambrian basement samples from northern Illinois and adjacent states

Putnam County
 Heidari, Manoutchehr. Analysis of rock stress around a liquid waste injection system in Illinois

Richland County
 Millay, M. A. Micrometophyte development in the Paleozoic seed fern family Callistophytaceae

Rock Island County
 Leary, Richard L. Topography and geology of the Early Pennsylvanian erosional surface on the northwest margin of the Illinois Basin, USA

Saint Clair County
 Barnhardt, Michael L. Identifying buried Indian mounds and geomorphic surfaces near Cahokia, Illinois
 Danner, Stephen K. Thin and disturbed Herrin (No. 6) coal near the boundaries of the Illinois Basin
 Klein, S. Moisture characteristics of compacted soils for use in trench covers

Saline County
 Bigelow, Tom. Small pockets yielding big production
 Chong, She-Kong. Variations in hydrologic soil properties caused by mining activities
 DiMichele, William A. Paracopodites Morey & Morey, from the Carboniferous of Euramerica; a reassessment of generic affinities and evolution of "Lepidodendron" brevifolium Williamson
 Lumm, Donald K. Structural geology of Shawneetown fault zone, southeastern Illinois
 Mahaffy, James F. Spore patterns in the Indiana Coal V in the Middle Pennsylvanian near a

Saline County/Winnebago County

paleochannel
Rogers, Philip R. Roof fall study of the Harrisburg (No. 5) Coal in portions of Saline and Williamson counties, Illinois

Strunk, Kevin L. Structural relationships between Cottage Grove and Shawneetown fault systems, southeastern Illinois, as inferred from gravity data

Sangamon County
Stamer, J. K. Work plan for the Sangamon River basin, Illinois

Stephenson County
Anonymous. Illinois Deep Hole Project
Coates, M. S. Introduction to the Illinois Deep Hole Project
Couture, Rex A. Sampling of brine in cores of Precambrian granite from northern Illinois
Daniels, Jeffrey J. Interpretation of core and well log physical property data from drill hole UPH-3, Stephenson County, Illinois
Daniels, Jeffrey J. Interpretation of core and well log physical properties data from drill hole UPH-3, Stephenson County, Illinois
Doe, Bruce R. The possible bearing of the granite of the UPH deep drill holes, northern Illinois, on the origin of Mississippi Valley ore deposits
Eckstein, Y. Petrographic and physical factors controlling thermal conductivity of granitic rocks in Illinois deep holes UPH 1, 2, and 3
Haimson, Bezalel C. State of stress, permeability, and fractures in the Precambrian granite of northern Illinois
Hoppe, W. J. Age and significance of Precambrian basement samples from northern Illinois and adjacent states
Kombrink, Mark. Oxygen isotopic compositions of minerals from Illinois Deep Drill Hole granites
Kowallis, Bart J. Microcrack study of granitic cores from Illinois deep borehole UPH 3
Lidiak, Edward G. Petrology and physical properties of granites from the Illinois deep hole in Stephenson County

Rosholt, J. N. Uranium-series disequilibrium in granite from core samples of drill hole UPH-3, Stephenson County, Illinois
Shieh, Yuch-Ning. Oxygen isotope study of Precambrian granites from the Illinois Deep Hole Project
Wang, H. F. Seismic velocities of lower Paleozoic stratigraphic units in Stephenson County, Illinois

Tazewell County
Searight, Thomas K. Geologic history of the Mackinaw Member of the Henry Formation in the Illinois River valley in Tazewell County, Illinois

Union County
Jaeger, Paul. The effects of depositional environment and diagenesis on the porosity and permeability in the Salem Limestone in Union and Monroe counties, southern Illinois

Vermilion County
Danner, Stephen K. Thin and disturbed Herrin (No. 6) coal near the boundaries of the Illinois Basin

Wabash County
Hoppe, W. J. Age and significance of Precambrian basement samples from northern Illinois and adjacent states

Williamson County
DiMichele, William A. Paralycopodites Morey & Morey, from the Carboniferous of Euramerica: a reassessment of generic affinities and evolution of "Lepidodendron" brevifolium Williamson
Loomis, Edward Charles. The effects of anaerobically digested municipal sanitary sewage sludge on the oxidation of pyrite
Millay, M. A. Microgametophyte development in the Paleozoic seed fern family Callistophytaceae
Millay, M. A. An unusual botryopterid sporangial aggregation from the Middle Pennsylvanian of North America
Nelson, W. John. The Turner Mine Shale Member; a newly named stratigraphic unit of the Carbondale Formation
Rogers, Philip R. Roof fall study of the Harrisburg (No. 5) Coal in portions of Saline and Williamson counties, Illinois
Shadle, Gary L. The frond of Heterangium

Winnebago County
Allen, Howard E., Jr. Runoff, sediment transport, and water quality in a northern Illinois agricultural watershed before urban development 1979-81
Berg, Richard C. A guide to the geology of the Capron-Rockford area

BIBLIOGRAPHY AND INDEX OF ILLINOIS GEOLOGY

ROCK-UNIT INDEX

Abbott Formation

Goodwin, Jonathan H. Geology of carbonate aggregate resources of Illinois
Jacobson, Russell J. New Burnside "anticline"; part of fluorspar area fault complex?
Peppers, Russel A. Comparison of miospore assemblages in the Pennsylvanian System of the Illinois Basin with those in the Upper Carboniferous of Western Europe

Absaroka Sequence

Atherton, Elwood. Geologic history of the Illinois Basin

Allen's Grove Member

Fricke, Carl A. P. The Pleistocene stratigraphy and geomorphology of central-southern Wisconsin and part of northern Illinois

Anna Shale

Baumann, Dean R. The occurrence and distribution of mineral matter in coal lithotypes in the Herrin (No. 6) Coal seam under marine and nonmarine influences

Cleaveland, Thomas H. Geostatistical analysis of the facies and thickness variation in the Brereton Limestone and the Anna Shale in part of southwestern Illinois

Crelling, John C. Variations in the forms and occurrences of sulfur in the Herrin No. 6 coal seam in southern Illinois

DeMaris, Philip J. Geology of the Herrin (No. 6) coal and associated strata at Old Ben No. 24, Franklin County, Illinois

DeMaris, Philip J. Coal-ball

formation in the Herrin Coal, Franklin County, Illinois
Lizak, John B. Geologic structures and horizontal stresses; their impact on petroleum and coal production in Illinois Basin
Stutzman, Paul E. Non-marine and marine influenced Herrin Coal and associated roof shales from southern Illinois; a mineralogical and statistical analysis

Anvil Rock Sandstone

DeMaris, Philip J. An erosional channel in the roof of the Illinois Herrin (No. 6) coal; implications for exploration
Nelson, W. John. Geologic disturbances in Illinois coal seams

Arbuckle Group

Signor, D. C. Ground-water flow regime based on preliminary data for regional aquifer systems

Argyle Till Member

Fricke, Carl A. P. The Pleistocene stratigraphy and geomorphology of central-southern Wisconsin and part of northern Illinois

Aux Vases Sandstone

Bigelow, Tom. Wildcat find strengthens interest in Renault sand

Jennings, James R. Aux Vases-Renault-Yankeetown depositional sequence in comparison to other Chesterian depositional sequences

Jennings, James R. Paleontology and stratigraphy of strata associated with the basal Chesterian in its type region

Seyler, Beverly J.

Stratigraphic traps and deposition of Aux Vases and uppermost Ste. Genevieve formations (Mississippian), southern Illinois

Young, Victor R. Drowned barrier bar and tidal inlet sequences in Buckner-Sesser-Valier fields, Franklin County, Illinois

Backbone Limestone

Devera, Joseph A. A new species of Asphaltina from the Grand Tower Limestone of southern Illinois
Lange, Rolf V. A petrographic study of the Backbone (Little Saline) Limestone (Lower Devonian) in southwestern Illinois and southeastern Missouri

Banner Formation

Johnson, W. Hilton. Sedimentological interpretation of the Belgium Member, Banner Formation, eastern Illinois

Thompson, Thomas L. Late Cretaceous marine foraminifers from Pleistocene fluviolacustrine deposits in eastern Missouri

Baraboo Quartzite

Dott, R. H., Jr. The Baraboo Interval; a tale of red quartzes

Batavia Member

Masters, John M. Geology of sand and gravel aggregate resources of Illinois

Searight, Thomas K. Geologic history of the Mackinaw Member of the Henry Formation in the Illinois River valley in Tazewell County, Illinois

Batestown Till Member

von Rhee, Robert W.
Lithofacies in the Batestown
Till Member, Wedron
Formation at two sites in
eastern Illinois

Bear Gulch Limestone

Factor, David F. The
paleoecology of
malacostracean arthropods in
the Bear Gulch Limestone
(Namurian) of central
Montana

Belgium Member

Johnson, W. Hilton.
Sedimentological
interpretation of the
Belgium Member, Banner
Formation, eastern Illinois

Bethel Formation

Kosanke, Robert M. Spores from
Chesterian coals of the
Illinois Basin

Big Clifty Sandstone

Kelly, Stuart M. Middle
Chesterian (Golconda) marine
deltaic paleocommunities
from the Illinois Basin

Blackjack Creek Limestone

Knight, Kimbell L. Breezy Hill
Limestone, a prelude to the
major widespread
Pennsylvanian cyclothsems of
Midcontinent North America

Boggy Formation

DiMichele, William A.
Paralycopodites Morey &
Morey, from the
Carboniferous of Euramerica;
a reassessment of generic
affinities and evolution of
"Lepidodendron" brevifolium
Williamson

Bond Formation

Goodwin, Jonathan H. Geology
of carbonate aggregate
resources of Illinois
Jacobson, Russell J. Revised
correlations of the Shoal
Creek and La Salle limestone
members of the Bond
Formation (Pennsylvanian) in
northern Illinois
Sutherland, H. J. Prediction
of subsidence using
complementary influence
functions

Borden Siltstone

Atherton, Elwood. Geologic
history of the Illinois
Basin

Boylis Formation

Thompson, Thomas L. Late
Cretaceous marine
foraminifers from
Pleistocene fluviolacustrine
deposits in eastern Missouri

Brainard Shale

Fluegeman, Richard H., Jr.
Brainard Shale outliers
(Upper Ordovician, Maquoketa
Group) in southeastern
Indiana

Kluessendorf, Joanne. Oolites
at the Ordovician-Silurian
boundary in Illinois

Kolata, Dennis R.
Lithostratigraphy and
depositional environments of
the Moquoketa Group
(Ordovician) in northern
Illinois

Kolata, Dennis R. Maquoketa
Shale Group of northern
Illinois

Brassfield Formation

Fluegeman, Richard H., Jr.
Brainard Shale outliers
(Upper Ordovician, Maquoketa
Group) in southeastern
Indiana

Breathitt Formation

DiMichele, William A.
Paralycopodites Morey &
Morey, from the
Carboniferous of Euramerica;
a reassessment of generic
affinities and evolution of
"Lepidodendron" brevifolium
Williamson

Breezy Hill Limestone
Knight, Kimbell L. Breezy Hill
Limestone, a prelude to the
major widespread
Pennsylvanian cyclothsems of
Midcontinent North America

Brereton Limestone Member

Cleaveland, Thomas H.
Geostatistical analysis of
the facies and thickness
variation in the Brereton
Limestone and the Anna Shale
in part of southwestern
Illinois

DeMaris, Philip J. Geology of
the Herrin (No. 6) coal and
associated strata at Old Ben
No. 24, Franklin County,
Illinois

DeMaris, Philip J. Coal-ball
formation in the Herrin
Coal, Franklin County,
Illinois

Guzan, Michael J. Petrography
and thickness variations of
Brereton Limestone Member

(Carbondale Formation,
Middle Pennsylvanian); an
important roof-rock in part
of Illinois Basin

Guzan, Michael John.
Petrographic investigation
and examination of the
thickness of the Brereton
Limestone (Middle
Pennsylvanian)) in a portion
of the Illinois Basin

Lizak, John B. Geologic
structures and horizontal
stresses; their impact on
petroleum and coal
production in Illinois Basin
O'Connell, Dennis B. Biofacies
and habitats of Brereton
Limestone Member (Carbondale
Formation, Middle
Pennsylvanian), southwestern
Illinois

O'Connell, Dennis B.
Paleoecology and
environments of deposition
of the Brereton Limestone
Member (Pennsylvanian,
Desmoinesian) in
southwestern Illinois

Burlington Limestone
Carozzi, Albert V. Crinoid
arenite banks and crinoid
wacke inertia flows; a
depositional model for the
Burlington Limestone (Middle
Mississippian), Illinois,
Iowa, and Missouri, USA
Chauff, Karl M. Multielement
conodont species and
ecological interpretation of
the lower Osagean (Lower
Carboniferous) conodont
zonation from Midcontinent
North America

Goodwin, Jonathan H. Geology
of carbonate aggregate
resources of Illinois
Thompson, Thomas L.

Mississippian stratotype; an
overview

Byron Formation
Brand, Uwe. Diagenetic history
and fluid migration pathways
of Silurian formations,
Michigan Basin

Cabannis Group
DiMichele, William A.
Paralycopodites Morey &
Morey, from the
Carboniferous of Euramerica;
a reassessment of generic
affinities and evolution of
"Lepidodendron" brevifolium
Williamson

Cahokia Alluvium

Hajic, Edwin R. Age and origin of the late Wisconsinan Deer Plain Terrace in the Illinois Valley

Masters, John M. Geology of sand and gravel aggregate resources of Illinois

Calhoun Coal

Stidd, Benton M. The synangiate nature of Dolerotheca

Canton Shale Member

Nelson, W. John. The Turner Mine Shale Member; a newly named stratigraphic unit of the Carbondale Formation

Capron Member

Fricke, Carl A. P. The Pleistocene stratigraphy and geomorphology of central-southern Wisconsin and part of northern Illinois

Carbondale Formation

Burk, Mitchell Keith. Facies and depositional environments of the Energy Shale (Pennsylvanian) in southwestern Jefferson County, Illinois

Burk, Mitchell Keith. Facies and depositional environments of Energy Shale Member (Carbondale Formation, Pennsylvanian), southwestern Jefferson County, Illinois

Chen, Pei-Yuan. Classification of clastic sediments in Pennsylvanian coal-bearing formations emphasizing mudrock lithology

Chou, C. L. Geochemistry of trace elements and sulfur in the Springfield (No. 5) Coal in the Illinois Basin

Chou, Chen-Lin. Relationship between geochemistry of coal and the nature of strata overlying the Herrin Coal in the Illinois Basin

Crelling, John C. Variations in the forms and occurrences of sulfur in the Herrin No. 6 coal seam in southern Illinois

DeMaris, Philip J. Geology of the Herrin (No. 6) coal and associated strata at Old Ben No. 24, Franklin County, Illinois

DeMaris, Philip J. An erosional channel in the roof of the Illinois Herrin (No. 6) coal; implications for exploration

DiMichele, William A. *Paralyycopodites Morey & Morey*, from the Carboniferous of Euramerica; a reassessment of generic affinities and evolution of "Lepidodendron" *brevifolium* Williamson

Eggert, D. L. Origin and economic geology of the Springfield Coal Member in the Illinois Basin (Field trip 9)

Gastaldo, Robert A. *Trigonocarpus leeanus*, a new species from the Middle Pennsylvanian of southern Illinois

Gastaldo, Robert A. *Palaeostachya dircei* n. sp., an authigenically cemented equisetalean strobilus from the Middle Pennsylvanian of southern Illinois

Goodwin, Jonathan H. Geology of carbonate aggregate resources of Illinois

Guzan, Michael J. Petrography and thickness variations of Brereton Limestone Member (Carbondale Formation, Middle Pennsylvanian); an important roof-rock in part of Illinois Basin

Hatcher, Patrick G. Coalification of tissues (medullasan seed fern) in a coal ball of the "Herrin (No. 6) Coal Member" of the Carbondale Formation, Illinois Basin

Konecny, Jim. The Mazon Creek nodules

Lizak, John B. Geologic structures and horizontal stresses; their impact on petroleum and coal production in Illinois Basin

Merrill, Glen K. Trace fossils within limestone interbeds, Oak Grove Member, Carbondale Formation (Pennsylvanian, Desmoinesian), northwestern Illinois

Millay, M. A. Microgametophyte development in the Paleozoic seed fern family *Callistophytaceae*

Millay, M. A. An unusual botryopterid sporangial aggregation from the Middle Pennsylvanian of North America

Nelson, W. John. The Turner Mine Shale Member; a newly named stratigraphic unit of the Carbondale Formation

Nelson, W. John. A gravitational slide in the Energy Shale Member overlying the Herrin (No. 6) Coal Member in southern Illinois

D'Connell, Dennis B. Biofacies and habitats of Brereton Limestone Member (Carbondale Formation, Middle Pennsylvanian), southwestern Illinois

Stidd, Benton M. An anatomically preserved *Potonia* with *in situ* spores from the Pennsylvanian of Illinois

Sutherland, H. J. Prediction of subsidence using complementary influence functions

Trask, C. Brian. Revision of nomenclature for the Springfield (No. 5) Coal Member of Illinois

Carimona Limestone

Kolata, Dennis R. Correlation of K-bentonites in the Decorah Subgroup of the Mississippi Valley by chemical fingerprinting

Carmi Member

Hajic, Edwin R. Age and origin of the late Wisconsinan Deer Plain Terrace in the Illinois Valley

Caseyville Formation

Goodwin, Jonathan H. Geology of carbonate aggregate resources of Illinois

Kosanek, Robert M. Spores from Chesterian coals of the Illinois Basin

Manger, Walter L. The Mississippian-Pennsylvanian boundary in the southern Midcontinent, United States

Peppers, Russel A. Comparison of miospore assemblages in the Pennsylvanian System of the Illinois Basin with those in the Upper Carboniferous of Western Europe

Cave Hill Member

Hakkio, Lisa B. Petrology, paleoecology, and depositional environments of a micritic limestone in Cave Hill Member of Kinkaid Formation (Mississippian, Chesterian), southern Illinois

Cherokee Group

Knight, Kimbell L. Breezy Hill Limestone, a prelude to the major widespread

Pennsylvanian cyclothsems of Midcontinent North America
Mahaffy, James F. Morphology of Microspermopteris and occurrences in Middle Pennsylvanian coal balls

Chester Group
Kelly, Stuart M. Middle Chesterian (Golconda) marine deltaic paleocommunities from the Illinois Basin

Choteau Limestone
Thompson, Thomas L. Mississippian stratotype; an overview

Clayton Formation
Fluegeman, Richard H., Jr. The stratigraphic position of Paleocene foraminifera from Kentucky and Illinois

Clearfork Formation
Barber, A. H., Jr. Infill drilling to increase reserves; actual experience in nine fields in Texas, Oklahoma, and Illinois

Cleeg Creek Member
Cross, Aureal T. Plants of Devonian-Mississippian black shales, Eastern Interior, U.S.A.

Clinton Member
Fricke, Carl A. P. The Pleistocene stratigraphy and geomorphology of central-southern Wisconsin and part of northern Illinois

Cordell Formation
Brand, Uwe. Diagenetic history and fluid migration pathways of Silurian formations, Michigan Basin

Darien-West Chicago Moraine
Fricke, Carl A. P. The Pleistocene stratigraphy and geomorphology of central-southern Wisconsin and part of northern Illinois

Davis Coal Member
Jacobson, Russell J. Stratigraphic correlations of Seelyville, De Koven, and Davis coals (Desmoinesian) of Illinois Basin coalfield

De Koven Coal Member
Jacobson, Russell J. Stratigraphic correlations of Seelyville, De Koven, and

Davis coals (Desmoinesian) of Illinois Basin coalfield

Decorah Shale
Kolata, Dennis R. Correlation of K-bentonites in the Decorah Subgroup of the Mississippi Valley by chemical fingerprinting

Degonia Formation
Kosanke, Robert M. Spores from Chesterian coals of the Illinois Basin

Deicke Bentonite
Kolata, Dennis R. Correlation of K-bentonites in the Decorah Subgroup of the Mississippi Valley by chemical fingerprinting

Dickeyville Bentonite
Kolata, Dennis R. Correlation of K-bentonites in the Decorah Subgroup of the Mississippi Valley by chemical fingerprinting

Dubuque Formation
Delgado, David J. Deposition and diagenesis of the Galena Group in the Upper Mississippi Valley

Dunleith Formation
Delgado, David J. Deposition and diagenesis of the Galena Group in the Upper Mississippi Valley

Dykersburg Shale Member
Chou, C. L. Geochemistry of trace elements and sulfur in the Springfield (No. 5) Coal in the Illinois Basin

Nelson, W. John. The Turner Mine Shale Member; a newly named stratigraphic unit of the Carbondale Formation

Rogers, Philip R. Roof fall study of the Harrisburg (No. 5) Coal in portions of Saline and Williamson counties, Illinois

Eau Claire Formation
Heidari, Manoutchehr. Analysis of rock stress around a liquid waste injection system in Illinois
Wang, H. F. Seismic velocities of lower Paleozoic stratigraphic units in Stephenson County, Illinois

Edgewood Group
Amsden, Thomas W. Dolitic strata of the Keel Formation and Edgewood Group (Late

Ordovician and Early Silurian), Texas Panhandle to the Mississippi Valley
Kluessendorf, Joanne. Dolites at the Ordovician-Silurian boundary in Illinois

Elkhorn Formation
Fluegeman, Richard H., Jr. Brainard Shale outliers (Upper Ordovician, Maquoketa Group) in southeastern Indiana

Elkport Bentonite
Kolata, Dennis R. Correlation of K-bentonites in the Decorah Subgroup of the Mississippi Valley by chemical fingerprinting

Energy Shale
DeMaris, Philip J. Geology of the Herrin (No. 6) coal and associated strata at Old Ben No. 24, Franklin County, Illinois

Energy Shale Member
Baumann, Dean R. The occurrence and distribution of mineral matter in coal lithotypes in the Herrin (No. 6) Coal seam under marine and nonmarine influences

Burk, Mitchell Keith. Facies and depositional environments of the Energy Shale (Pennsylvanian) in southwestern Jefferson County, Illinois

Burk, Mitchell Keith. Facies and depositional environments of Energy Shale Member (Carbondale Formation, Pennsylvanian), southwestern Jefferson County, Illinois

Crelling, John C. Variations in the forms and occurrences of sulfur in the Herrin No. 6 coal seam in southern Illinois

DeMaris, Philip J. Coal-ball formation in the Herrin Coal, Franklin County, Illinois

Kravits, Christopher M. The effects of overbank deposition on the quality and maceral composition of the Herrin (No. 6) Coal of southern Illinois

Lizak, John B. Geologic structures and horizontal stresses; their impact on petroleum and coal production in Illinois Basin
Nelson, W. John. A

gravitational slide in the Energy Shale Member overlying the Herrin (No. 6) Coal Member in southern Illinois
Stutzman, Paul E. Non-marine and marine influenced Herrin Coal and associated roof shales from southern Illinois; a mineralogical and statistical analysis

Equality Formation
Hajic, Edwin R. Age and origin of the late Wisconsinan Deer Plain Terrace in the Illinois Valley

Masters, John M. Geology of sand and gravel aggregate resources of Illinois

Excello Shale
Knight, Kimbell L. Breezy Hill Limestone, a prelude to the major widespread Pennsylvanian cyclothems of Midcontinent North America

Fairgrange Till Member
Hardesty, Alan F. The distribution of the Piatt Till Member of the Wedron Formation in Coles County, Illinois

Klein, S. Moisture characteristics of compacted soils for use in trench covers

Fayetteville Shale
Woodland, Bertram G. Fabric of the clastic component of Carboniferous concretions and their enclosing matrix

Fern Glen Formation
Chauff, Karl M. Multielement conodont species and ecological interpretation of the lower Osagean (Lower Carboniferous) conodont zonation from Midcontinent North America

Fond du Lac Formation
Flock, Mark A. The late Wisconsinan Savanna Terrace in tributaries to the upper Mississippi River

Fort Atkinson Formation
Kolata, Dennis R. Lithostratigraphy and depositional environments of the Moquoketa Group (Ordovician) in northern Illinois

Kolata, Dennis R. Maquoketa Shale Group of northern Illinois

Fort Payne Formation
Anonymous. Illinois; Buckhorn East most exciting play

Fort Union Formation
Cahill, Richard A. Forms and volatilities of trace and minor elements in coal; I, A comparison of three pyrolysis units

Fountain Creek Formation
Maslowski, Andy. Frac sand remains important geological find

Foxhollow Member
Fricke, Carl A. P. The Pleistocene stratigraphy and geomorphology of central-southern Wisconsin and part of northern Illinois

Francis Creek Shale
Baird, Gordon C. Depositional events recorded in the Francis Creek Shale; taphonomy of the Pennsylvanian Mazon Creek locality in Illinois

Konecny, Jim. The Mazon Creek nodules

Woodland, Bertram G. Fabric of the clastic component of Carboniferous concretions and their enclosing matrix

Galena Group
Delgado, David J. Deposition and diagenesis of the Galena Group in the Upper Mississippi Valley

Goodwin, Jonathan H. Geology of carbonate aggregate resources of Illinois

Kolata, Dennis R. Correlation of K-bentonites in the Decorah Subgroup of the Mississippi Valley by chemical fingerprinting

Galesville Sandstone
Heidari, Manoutchehr. Analysis of rock stress around a liquid waste injection system in Illinois

Girardeau Limestone
Kluessendorf, Joanne. Dolites at the Ordovician-Silurian boundary in Illinois

Glasford Formation
Cartwright, K. Hydrogeology of the Mahomet bedrock valley deposits

Masters, John M. Geology of sand and gravel aggregate resources of Illinois

Glen Coe Member
Kolata, Dennis R. Correlation of K-bentonites in the Decorah Subgroup of the Mississippi Valley by chemical fingerprinting

Grand Tower Limestone
Devera, Joseph A. A new species of Asphaltina from the Grand Tower Limestone of southern Illinois

Grassy Creek Shale
Frost, J. K. Enrichment of trace metals and organic carbon in shales of the New Albany Group

Reinbold, Mark L. Facies, formation boundaries, and chronostratigraphy in the upper part of the New Albany Shale Group (Devonian-Mississippian) in the Illinois Basin

Greenfield Formation
Brand, Uwe. Diagenetic history and fluid migration pathways of Silurian formations, Michigan Basin

Grove Church Shale
Kosanke, Robert M. Spores from Chesterian coals of the Illinois Basin

Manger, Walter L. The Mississippian-Pennsylvanian boundary in the southern Midcontinent, United States

Guttenberg Formation
Kolata, Dennis R. Correlation of K-bentonites in the Decorah Subgroup of the Mississippi Valley by chemical fingerprinting

Haeger Till
Fricke, Carl A. P. The Pleistocene stratigraphy and geomorphology of central-southern Wisconsin and part of northern Illinois

Hansel, Ardith K. Evidence for stagnant ice in the Chain O'Lakes Lowland during deposition of Haeger and Wadsworth till

Hagarstown Member
Killey, Myrna M. Stratigraphic reassignment of the Hagarstown Member in Illinois

Masters, John M. Geology of sand and gravel aggregate resources of Illinois

Hannibal Shale
 Reinbold, Mark L. Facies, formation boundaries, and chronostratigraphy in the upper part of the New Albany Shale Group (Devonian-Mississippian) in the Illinois Basin

Harrisburg Coal Member
 Rogers, Philip R. Roof fall study of the Harrisburg (No. 5) Coal in portions of Saline and Williamson counties, Illinois
 Trask, C. Brian. Revision of nomenclature for the Springfield (No. 5) Coal Member of Illinois

Heath Formation
 Factor, David F. The paleoecology of malacostracan arthropods in the Bear Gulch Limestone (Namurian) of central Montana
 Rhodes, F. H. T. Natural assemblages of elements; interpretation and taxonomy

Henry Formation
 Masters, John M. Geology of sand and gravel aggregate resources of Illinois
 Searight, Thomas K. Geologic history of the Mackinaw Member of the Henry Formation in the Illinois River valley in Tazewell County, Illinois

Herrin Coal Member
 Baumann, Dean R. The occurrence and distribution of mineral matter in coal lithotypes in the Herrin (No. 6) Coal seam under marine and nonmarine influences
 Burk, Mitchell Keith. Facies and depositional environments of Energy Shale Member (Carbondale Formation, Pennsylvanian), southwestern Jefferson County, Illinois
 Chou, Chen-Lin. Relationship between geochemistry of coal and the nature of strata overlying the Herrin Coal in the Illinois Basin
 Cleaveland, Thomas H. Geostatistical analysis of the facies and thickness variation in the Brereton Limestone and the Anna Shale in part of southwestern Illinois
 Crelling, John C. Variations in the forms and occurrences of sulfur in the Herrin No. 6 coal seam in southern Illinois

Crelling, John C. Spectral analysis of fluorescent macerals in the Herrin No. 6 coal seam

Danner, Stephen K. Thin and disturbed Herrin (No. 6) coal near the boundaries of the Illinois Basin

DeMaris, Philip J. Geology of the Herrin (No. 6) coal and associated strata at Old Ben No. 24, Franklin County, Illinois

DeMaris, Philip J. An erosional channel in the roof of the Illinois Herrin (No. 6) coal; implications for exploration

DeMaris, Philip J. Coal-ball formation in the Herrin Coal, Franklin County, Illinois

Fiene, F. L. Mineral matter and trace elements in the Herrin (No. 6) Coal in the Illinois Basin

Gastaldo, Robert A. A new species of *Trigonocarpus Brongniart* from southern Illinois

Gastaldo, Robert A. A preliminary report on a *Calamostachys* from the Middle Pennsylvanian of southern Illinois

Hatcher, Patrick G. Coalification of tissues (medullosan seed fern) in a coal ball of the "Herrin (No. 6) Coal Member" of the Carbondale Formation, Illinois Basin

Kravits, C. M. Effects of overbank deposition on the quality and maceral composition of the Herrin (No. 6) coal (Pennsylvanian) of southern Illinois

Kravits, Christopher M. The effects of overbank deposition on the quality and maceral composition of the Herrin (No. 6) Coal of southern Illinois

Mahaffy, James F. Spore patterns in the Indiana Coal V in the Middle Pennsylvanian near a paleochannel

Nelson, W. John. Geologic disturbances in Illinois coal seams

Nelson, W. John. A gravitational slide in the Energy Shale Member overlying the Herrin (No. 6) Coal Member in southern Illinois

Stutzman, Paul E. Non-marine and marine influenced Herrin Coal and associated roof shales from southern Illinois; a mineralogical and statistical analysis

Hickory Formation
 Maslowski, Andy. Frac sand remains important geological find

Hinckley Sandstone
 Flock, Mark A. The late Wisconsinan Savanna Terrace in tributaries to the upper Mississippi River

Horton Creek Formation
 Reinbold, Mark L. Facies, formation boundaries, and chronostratigraphy in the upper part of the New Albany Shale Group (Devonian-Mississippian) in the Illinois Basin

Hushpuckney Shale
 Coveney, Raymond M., Jr. Thin black Pennsylvanian-age shales of the Mid-continent U.S.; a neglected metallic resource?

Hymera Coal Member
 Heberton, Richard P. Trace and minor element analyses of the Hymera Coal Member of Indiana (Coal VI)

Imo Formation
 Manger, Walter L. The Mississippian-Pennsylvanian boundary in the southern Midcontinent, United States

Ironton Sandstone
 Heidari, Manoutchehr. Analysis of rock stress around a liquid waste injection system in Illinois

Jamestown Coal
 Heberton, Richard P. Trace and minor element analyses of the Hymera Coal Member of Indiana (Coal VI)

Jordan Sandstone
 Maslowski, Andy. Frac sand remains important geological find

Kansas City Group
 Coveney, Raymond M., Jr. Thin black Pennsylvanian-age shales of the Mid-continent U.S.; a neglected metallic

Piatt Till Member

Hardesty, Alan F. The distribution of the Piatt Till Member of the Wedron Formation in Coles County, Illinois

Platteville Group

Dathe, David B. The origin of mottled dolomitic limestones in the Platteville Group (Ordovician) of northern Illinois

Goodwin, Jonathan H. Geology of carbonate aggregate resources of Illinois

Kolata, Dennis R. Correlation of K-bentonites in the Decorah Subgroup of the Mississippi Valley by chemical fingerprinting

Porters Creek Formation

Fluegeman, Richard H., Jr. The stratigraphic position of Paleocene foraminifera from Kentucky and Illinois

Prairie du Chien Group

Goodwin, Jonathan H. Geology of carbonate aggregate resources of Illinois

Racine Formation

Brand, Uwe. Diagenetic history and fluid migration pathways of Silurian formations, Michigan Basin

Renault Formation

Bigelow, Tom. Wildcat find strengthens interest in Renault sand

Jennings, James R. Aux Vases-Renault-Yankeetown depositional sequence in comparison to other Chesterian depositional sequences

Jennings, James R. Paleontology and stratigraphy of strata associated with the basal Chesterian in its type region

Kosanke, Robert M. Spores from Chesterian coals of the Illinois Basin

Roxana Silt

Fehrenbacher, J. B. Loess stratigraphy, distribution, and time of deposition in Illinois

Saint David Limestone

Nelson, W. John. The Turner Mine Shale Member; a newly named stratigraphic unit of the Carbondale Formation

Rogers, Philip R. Roof fall study of the Harrisburg (No. 5) Coal in portions of Saline and Williamson counties, Illinois

Saint Louis Limestone

Anonymous. Illinois; Buckhorn East most exciting play

Goodwin, Jonathan H. Geology of carbonate aggregate resources of Illinois

Jennings, James R. Algal compressions from the Mississippian of the Illinois Basin

Thompson, Thomas L. Mississippian stratotype; an overview

Saint Peter Sandstone

Bigelow, Tom. Fault, uplift discovered in Adams County

Kreutzfeld, James E. Pore geometry and permeability of the St. Peter Sandstone in the Illinois Basin

Maslowski, Andy. Frac sand remains important geological find

Winfree, K. E. Depositional environments of the St. Peter Sandstone of the Upper Midwest

Sainte Genevieve Limestone

Jennings, James R. Paleontology and stratigraphy of strata associated with the basal Chesterian in its type region

Miller, Halsey W. Petroleum geology of Macoupin County, Illinois

Seyler, Beverly J. Stratigraphic traps and deposition of Aux Vases and uppermost Ste. Genevieve formations (Mississippian), southern Illinois

Thompson, Thomas L. Mississippian stratotype; an overview

Salem Limestone

Jaeger, Paul. The effects of depositional environment and diagenesis on the porosity and permeability in the Salem Limestone in Union and Monroe counties, southern Illinois

Jennings, James R. Algal compressions from the Mississippian of the Illinois Basin

San Andres Formation

Barber, A. H., Jr. Infill drilling to increase reserves; actual experience in nine fields in Texas, Oklahoma, and Illinois

San Angelo Formation

Barber, A. H., Jr. Infill drilling to increase reserves; actual experience in nine fields in Texas, Oklahoma, and Illinois

Sanderson Formation

Cross, Aureal T. Plants of Devonian-Mississippian black shales, Eastern Interior, U.S.A.

Saverton Shale

Reinbold, Mark L. Facies, formation boundaries, and chronostratigraphy in the upper part of the New Albany Shale Group (Devonian-Mississippian) in the Illinois Basin

Scales Shale

Kluessendorf, Joanne. Dolites at the Ordovician-Silurian boundary in Illinois

Kolata, Dennis R. Lithostratigraphy and depositional environments of the Moquoketa Group (Drudovician) in northern Illinois

Kolata, Dennis R. Maquoketa Shale Group of northern Illinois

Schoolcraft Formation

Brand, Uwe. Diagenetic history and fluid migration pathways of Silurian formations, Michigan Basin

Seelyville Coal

Nelson, W. John. Geologic disturbances in Illinois coal seams

Seelyville Coal

Jacobson, Russell J. Stratigraphic correlations of Seelyville, De Koven, and Davis coals (Desmoinesian) of Illinois Basin coalfield

Shawnee Group

Heckel, Philip H. Changing concepts of Midcontinent Pennsylvanian cycloths, North America

Langenheim, Ralph L., Jr. Detailed biostratigraphic correlation, Shumway "Cyclothem", Virgilian,

Shoal Creek Limestone Member/Wichita Group

Illinois Basin

Shoal Creek Limestone Member
Jacobson, Russell J. Revised correlations of the Shoal Creek and La Salle limestone members of the Bond Formation (Pennsylvanian) in northern Illinois

Spechts Ferry Formation
Kolata, Dennis R. Correlation of K-bentonites in the Decorah Subgroup of the Mississippi Valley by chemical fingerprinting

Spoon Formation
Ambrose, William Anthony. Aggraded fluvial and tide-dominated deltaic deposits of the Spoon Formation (Pennsylvanian) in the southern Illinois Basin; a shallow embayment
Ambrose, William Anthony. Tide-dominated deltaic deposits of the Spoon Formation (Pennsylvanian) in a narrow, subsiding trough, southern Illinois

Goodwin, Jonathan H. Geology of carbonate aggregate resources of Illinois
Jacobson, Russell J. Stratigraphic correlations of Seelyville, De Koven, and Davis coals (Desmoinesian) of Illinois Basin coalfield

Springfield Coal Member
Chou, C. L. Geochemistry of trace elements and sulfur in the Springfield (No. 5) Coal in the Illinois Basin
Eggert, D. L. Origin and economic geology of the Springfield Coal Member in the Illinois Basin (Field trip 9)

Nelson, W. John. Geologic disturbances in Illinois coal seams

Nelson, W. John. The Turner Mine Shale Member; a newly named stratigraphic unit of the Carbondale Formation

Trask, C. Brian. Revision of nomenclature for the Springfield (No. 5) Coal Member of Illinois

Staunton Formation
Jacobson, Russell J. Stratigraphic correlations of Seelyville, De Koven, and Davis coals (Desmoinesian) of Illinois Basin coalfield

Terre Haute Bank
Lovely, Daniel Arthur. The application of remote sensing to the detection of Niagaran pinnacle reefs in the Illinois Basin

Tioga Ash
Dennison, John M. Internal stratigraphy of Devonian Tioga Ash beds in Appalachian Valley and Ridge Province

Tippecanoe Sequence
Atherton, Elwood. Geologic history of the Illinois Basin

Tiskilwa Till
Fricke, Carl A. P. The Pleistocene stratigraphy and geomorphology of central-southern Wisconsin and part of northern Illinois

Wickham, Susan Specht. The Tiskilwa Till, a regional view of its origin and depositional processes

Trafalgar Formation
Kempton, John P. Stratigraphy of the Wedron and Trafalgar formations (Wisconsinan) in east-central Illinois and west-central Indiana (Field trip 3)

Trenton Formation
Bigelow, Tom. Fault, uplift discovered in Adams County

Turner Mine Shale Member
Nelson, W. John. The Turner Mine Shale Member; a newly named stratigraphic unit of the Carbondale Formation

Ullin Limestone
Anonymous. Illinois; Buckhorn East most exciting play

Wadsworth Till
Hansel, Ardith K. Evidence for stagnant ice in the Chain D'Lakes Lowland during deposition of Haeger and Wadsworth till

Hansel, Ardith K. The Wadsworth Till Member of Illinois and the equivalent Oak Creek Formation of Wisconsin

Waltersburg Formation
Jennings, James R. The morphology and relationships of *Rhodea*, *Telangium*, *Telangiopsis*, and

Heterangium

Warsaw Formation
Brenckle, Paul L. Calcareous microfossils from the Mississippian Keokuk Limestone and adjacent formations, Upper Mississippi River valley; their meaning for North American and intercontinental correlation
Thompson, Thomas L. Mississippian stratotype; an overview

Wasco Member
Searight, Thomas K. Geologic history of the Mackinaw Member of the Henry Formation in the Illinois River valley in Tazewell County, Illinois

Wedron Formation
Hansel, Ardith K. The Wadsworth Till Member of Illinois and the equivalent Oak Creek Formation of Wisconsin

Hardesty, Alan F. The distribution of the Piatt Till Member of the Wedron Formation in Coles County, Illinois

Kempton, John P. Stratigraphy of the Wedron and Trafalgar formations (Wisconsinan) in east-central Illinois and west-central Indiana (Field trip 3)

Klein, S. Moisture characteristics of compacted soils for use in trench covers

von Rhee, Robert W. Lithofacies in the Batestown Till Member, Wedron Formation at two sites in eastern Illinois

Wickham, Susan Specht. The Tiskilwa Till, a regional view of its origin and depositional processes

Whitewater Formation
Fluegeman, Richard H., Jr. Brainard Shale outliers (Upper Dravidian, Maquoketa Group) in southeastern Indiana

Wichita Group
Barber, A. H., Jr. Infill drilling to increase reserves; actual experience in nine fields in Texas, Oklahoma, and Illinois

Winnebago Formation
Fricke, Carl A. P. The
Pleistocene stratigraphy and
geomorphology of
central-southern Wisconsin
and part of northern
Illinois

Wise Lake Formation
Delgado, David J. Deposition
and diagenesis of the Galena
Group in the Upper
Mississippi Valley

Wolf River Batholith
Dott, R. H., Jr. The Baraboo
Interval; a tale of red
quartzites
Schulz, Klaus J. Trace element
geochemistry of Precambrian
granite from northern
Illinois Deep Drill Hole
UPH-3

Yankeetown Formation
Jennings, James R. Aux
Vases-Renault-Yankeetown
depositional sequence in
comparison to other
Chesterian depositional
sequences
Jennings, James R.
Paleontology and
stratigraphy of strata
associated with the basal
Chesterian in its type
region

Yorkville Till Member
Kemmis, T. J. Importance of
the regelation process to
certain properties of basal
tills deposited by the
Laurentide ice sheet in Iowa
and Illinois, U.S.A.

